

## **Appendix U**

# **Surface Water and Sediment Analytical Results**

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

### Westinghouse Electric Company

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: Groundwater

Lot Number: **UG15055**

Date Completed: 08/07/2019



08/15/2019 5:27 PM

Approved and released by:  
Project Manager: Grant Wilton



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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## **Case Narrative Westinghouse Electric Company Lot Number: UG15055**

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

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: UG15055**  
**Project Name: Groundwater**  
**Project Number:**

<b>Sample Number</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
001	SW-22	Aqueous	07/15/2019 1315	07/15/2019
002	SED-22	Solid	07/15/2019 1330	07/15/2019
003	SW-21	Aqueous	07/15/2019 1600	07/15/2019
004	SED-21	Solid	07/15/2019 1600	07/15/2019

(4 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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**Detection Summary**  
**Westinghouse Electric Company**  
**Lot Number: UG15055**  
**Project Name: Groundwater**  
**Project Number:**

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	SED-22	Solid	Acetone	8260B	88		ug/kg	11
002	SED-22	Solid	2-Butanone (MEK)	8260B	32		ug/kg	11
004	SED-21	Solid	Acetone	8260B	67		ug/kg	21

(3 detections)

# Inorganic non-metals

Client: **Westinghouse Electric Company**

Laboratory ID: **UG15055-001**

Description: **SW-22**

Matrix: **Aqueous**

Date Sampled: **07/15/2019 1315**

Project Name: **Groundwater**

Date Received: **07/15/2019**

Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/17/2019 0319	MDD		22813

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N				ND	0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-001</b>
Description: <b>SW-22</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1315</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/19/2019 2243	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-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
1,1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-001</b>
Description: <b>SW-22</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1315</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/19/2019 2243	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		106	70-130
Toluene-d8		107	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatle Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-001</b>
Description: <b>SW-22</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1315</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1311	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-001</b>
Description: <b>SW-22</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1315</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1311	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		56	37-129
2-Fluorophenol		36	24-127
Nitrobenzene-d5		61	38-127
Phenol-d5		50	28-128
Terphenyl-d14		42	10-148
2,4,6-Tribromophenol		63	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-002</b>
Description: <b>SED-22</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1330</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:
	% Solids: <b>26.0 07/17/2019 0103</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0419	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-002</b>
Description: <b>SED-22</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1330</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>26.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/18/2019 1100	JM1		23070	4.10

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>88</b>		<b>24</b>	<b>ug/kg</b>	<b>1</b>
Benzene	71-43-2	8260B	ND		6.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.1	ug/kg	1
<b>2-Butanone (MEK)</b>	<b>78-93-3</b>	<b>8260B</b>	<b>32</b>		<b>24</b>	<b>ug/kg</b>	<b>1</b>
Carbon disulfide	75-15-0	8260B	ND		6.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.1	ug/kg	1
Styrene	100-42-5	8260B	ND		6.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.1	ug/kg	1
Toluene	108-88-3	8260B	ND		6.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.1	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-002</b>
Description: <b>SED-22</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1330</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>26.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/18/2019 1100	JM1		23070	4.10

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		94	53-142
Bromofluorobenzene		98	47-138
Toluene-d8		117	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-002</b>
Description: <b>SED-22</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1330</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>26.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1645	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-002</b>
Description: <b>SED-22</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1330</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>26.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1645	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		66	24-137
2-Fluorophenol		62	16-136
Nitrobenzene-d5		64	12-144
Phenol-d5		65	26-148
Terphenyl-d14		81	20-127
2,4,6-Tribromophenol		89	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-003</b>
Description: <b>SW-21</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/17/2019 0320	MDD		22813

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N				ND	0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-003</b>
Description: <b>SW-21</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/19/2019 2307	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-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
1,1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-003</b>
Description: <b>SW-21</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/19/2019 2307	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Bromofluorobenzene		105	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-003</b>
Description: <b>SW-21</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1426	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-003</b>
Description: <b>SW-21</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1426	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		55	37-129
2-Fluorophenol		34	24-127
Nitrobenzene-d5		58	38-127
Phenol-d5		52	28-128
Terphenyl-d14		61	10-148
2,4,6-Tribromophenol		64	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-004</b>
Description: <b>SED-21</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	Project Number:
	% Solids: <b>34.0 07/17/2019 0103</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0435	GMH		24188

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-004</b>
Description: <b>SED-21</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>34.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	07/23/2019 1816	JM1		23498	4.05

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>67</b>		<b>25</b>	<b>ug/kg</b>	<b>2</b>
Benzene	71-43-2	8260B	ND		6.2	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.2	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.2	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.2	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		25	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.2	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.2	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.2	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.2	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.2	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.2	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.2	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.2	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.2	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.2	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.2	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.2	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.2	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.2	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.2	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.2	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.2	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.2	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.2	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.2	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.2	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.2	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.2	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.2	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.2	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.2	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.2	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.2	ug/kg	2
Styrene	100-42-5	8260B	ND		6.2	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.2	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.2	ug/kg	2
Toluene	108-88-3	8260B	ND		6.2	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.2	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.2	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.2	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.2	ug/kg	2

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-004</b>
Description: <b>SED-21</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>34.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	07/23/2019 1816	JM1		23498	4.05

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.2	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.2	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.2	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		119	68-124

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-004</b>
Description: <b>SED-21</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>34.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1709	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UG15055-004</b>
Description: <b>SED-21</b>	Matrix: <b>Solid</b>
Date Sampled: <b>07/15/2019 1600</b>	Project Name: <b>Groundwater</b>
Date Received: <b>07/15/2019</b>	% Solids: <b>34.0 07/17/2019 0103</b>
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1709	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		70	24-137
2-Fluorophenol		74	16-136
Nitrobenzene-d5		73	12-144
Phenol-d5		73	26-148
Terphenyl-d14		82	20-127
2,4,6-Tribromophenol		90	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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**Chain of Custody  
and  
Miscellaneous Documents**



## 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 **097622**

Client: <b>AECOM</b>		Report to Contact: <b>Jerry Grant</b>		Telephone No. / E-mail: <b>Jerry.Grant@AECOM.com</b>		Outside No.												
Address: <b>101 Reservoir Dr.</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>Columbia</b>	State: <b>SC</b>	Zip Code: <b>29203</b>	Product Name: <b>West Columbia</b>		Barcode:													
Project Name: <b>West Columbia</b>		Project No.:		NMS: <b>UG150555</b>		Remarks / Cooler I.D.												
Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Matrix						No. of Containers by Preservative Type			QC Requirements (Specify)						
			Agar	SW	SW	SW	SW	SW	SW	SW	SW		SW					
SEP-22	7-15-19	1315	X															
SEP-22	↓	1330	X															
SEP-21	↓	1600	X															
SEP-21	↓	1600	X															

Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Residuals 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"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison	<input type="checkbox"/> Unknown
1. Relinquished by: <i>[Signature]</i>	Date: <b>7-15-19</b>	Time: <b>1724</b>	1. Received by:	Date:	Time:	Date:	Time:	Date:
2. Relinquished by:	Date:	Time:	2. Received by:	Date:	Time:	Date:	Time:	Date:
3. Relinquished by:	Date:	Time:	3. Received by:	Date:	Time:	Date:	Time:	Date:
4. Relinquished by:	Date:	Time:	4. Laboratory received by: <i>[Signature]</i>	Date: <b>7-16-19</b>	Time: <b>1726</b>	Date:	Time:	Date:

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY  
 Received on ice (Circle)  No Ice Pack  Recal Temp **2.3** °C

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: MEO018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: ETB / 7/15/19

Lot #: UG15055

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 19-1020 2.3 / 2.3 °C NA / NA °C NA / NA °C NA / NA °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # NA
<b>Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)</b>	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA	
SR barcode labels applied by: ETB Date: 7/15/19	

Comments:

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# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

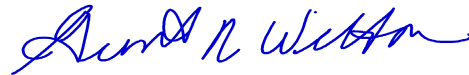
### Westinghouse Electric Company

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: Groundwater

Lot Number: **UG16058**

Date Completed: 08/02/2019



08/14/2019 5:25 PM

Approved and released by:  
Project Manager: Grant Wilton



The electronic signature above is the equivalent of a handwritten signature.  
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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: UG16058

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

### Volatile Organic Analysis – Method 8260B

Sample -004: Internal standard response for the sample exceeded the lower control limit, and a surrogate failed high. The sample was re-analyzed with concurring results. As such, the sample results may be biased high. The original set of data has been reported

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: UG16058  
Project Name: Groundwater  
Project Number:

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-15	Solid	07/16/2019 1120	07/16/2019
002	SED-18	Solid	07/16/2019 1230	07/16/2019
003	SW-18	Aqueous	07/16/2019 1230	07/16/2019
004	SED-20	Solid	07/16/2019 1400	07/16/2019
005	SW-20	Aqueous	07/16/2019 1400	07/16/2019
006	SED-23	Solid	07/16/2019 1545	07/16/2019
007	SW-23	Aqueous	07/16/2019 1545	07/16/2019
008	SED-24	Solid	07/16/2019 1615	07/16/2019

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(8 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Detection Summary  
Westinghouse Electric Company  
Lot Number: UG16058  
Project Name: Groundwater  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
003	SW-18	Aqueous	Nitrate - N	353.2	5.7		mg/L	15
003	SW-18	Aqueous	Tetrachloroethene	8260B	14		ug/L	16
004	SED-20	Solid	Acetone	8260B	110		ug/kg	21
004	SED-20	Solid	2-Butanone (MEK)	8260B	45		ug/kg	21
006	SED-23	Solid	Acetone	8260B	91		ug/kg	31
007	SW-23	Aqueous	Nitrate - N	353.2	7.3		mg/L	35
008	SED-24	Solid	Nitrate - N (soluble)	9056A	0.20		mg/kg	40
008	SED-24	Solid	Acetone	8260B	25		ug/kg	41

(8 detections)



# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-001
Description: SED-15	Matrix: Solid
Date Sampled: 07/16/2019 1120	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:
	% Solids: 79.3 07/17/2019 0103

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0524	GMH		24188

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-001
Description: SED-15	Matrix: Solid
Date Sampled: 07/16/2019 1120	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 79.3 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1346	JM1		23498	6.55

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		15	ug/kg	1
Benzene	71-43-2	8260B	ND		3.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		3.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		3.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		3.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		15	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		3.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		3.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		3.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		3.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		3.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		3.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		3.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		3.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		3.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		3.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		3.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		3.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		3.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		3.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		3.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		3.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		3.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		3.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		3.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		3.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		3.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		3.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		3.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		7.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		3.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		3.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		3.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		7.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		3.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		3.8	ug/kg	1
Styrene	100-42-5	8260B	ND		3.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		3.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		3.8	ug/kg	1
Toluene	108-88-3	8260B	ND		3.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		3.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		3.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		3.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		3.8	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-001
Description: SED-15	Matrix: Solid
Date Sampled: 07/16/2019 1120	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 79.3 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1346	JM1		23498	6.55

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		3.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		3.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		3.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		7.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	53-142
Bromofluorobenzene		105	47-138
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-001
Description: SED-15	Matrix: Solid
Date Sampled: 07/16/2019 1120	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 79.3 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1734	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		67	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		67	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		67	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		67	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		67	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		67	ug/kg	1
Caprolactam	105-60-2	8270D	ND		67	ug/kg	1
Carbazole	86-74-8	8270D	ND		67	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		67	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		67	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		67	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		67	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		67	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		67	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		67	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		67	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		67	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		67	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		67	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		67	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		67	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		67	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		67	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		67	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		67	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		67	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		67	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-001
Description: SED-15	Matrix: Solid
Date Sampled: 07/16/2019 1120	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 79.3 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1734	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		67	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		67	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		67	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		67	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		67	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		67	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		67	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		67	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		67	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		73	24-137
2-Fluorophenol		79	16-136
Nitrobenzene-d5		77	12-144
Phenol-d5		79	26-148
Terphenyl-d14		86	20-127
2,4,6-Tribromophenol		94	27-128

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 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-002
Description: SED-18	Matrix: Solid
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:
	% Solids: 76.0 07/17/2019 0103

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0556	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	2

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 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-002
Description: SED-18	Matrix: Solid
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 76.0 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1408	JM1		23498	5.59

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		18	ug/kg	1
Benzene	71-43-2	8260B	ND		4.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.5	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.5	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.5	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		18	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.5	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.5	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.5	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.5	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.5	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.5	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.5	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.5	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.5	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.5	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.5	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.5	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.5	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.5	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.5	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.5	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.5	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.5	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.5	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.5	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.5	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.5	ug/kg	1
Styrene	100-42-5	8260B	ND		4.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.5	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.5	ug/kg	1
Toluene	108-88-3	8260B	ND		4.5	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.5	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.5	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.5	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-002
Description: SED-18	Matrix: Solid
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 76.0 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1408	JM1		23498	5.59

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.5	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.5	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	53-142
Bromofluorobenzene		105	47-138
Toluene-d8		107	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-002
Description: SED-18	Matrix: Solid
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 76.0 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1758	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-002
Description: SED-18	Matrix: Solid
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 76.0 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1758	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		67	24-137
2-Fluorophenol		72	16-136
Nitrobenzene-d5		70	12-144
Phenol-d5		72	26-148
Terphenyl-d14		82	20-127
2,4,6-Tribromophenol		82	27-128

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-003
Description: SW-18	Matrix: Aqueous
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	5	07/18/2019 0131	MDD		22958

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	5.7		0.10	mg/L	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-003
Description: SW-18	Matrix: Aqueous
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 0135	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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	14		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-003
Description: SW-18	Matrix: Aqueous
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 0135	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		105	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-003
Description: SW-18	Matrix: Aqueous
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1451	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-003
Description: SW-18	Matrix: Aqueous
Date Sampled: 07/16/2019 1230	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1451	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		66	37-129
2-Fluorophenol		42	24-127
Nitrobenzene-d5		68	38-127
Phenol-d5		55	28-128
Terphenyl-d14		68	10-148
2,4,6-Tribromophenol		73	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-004
Description: SED-20	Matrix: Solid
Date Sampled: 07/16/2019 1400	% Solids: 13.6 07/17/2019 0103
Date Received: 07/16/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0612	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-004
Description: SED-20	Matrix: Solid
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 13.6 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1431	JM1		23498	3.84

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	110		26	ug/kg	1
Benzene	71-43-2	8260B	ND		6.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.5	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.5	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.5	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	45		26	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.5	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.5	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.5	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.5	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.5	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.5	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.5	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.5	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.5	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.5	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.5	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.5	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.5	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.5	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.5	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.5	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.5	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.5	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.5	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.5	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.5	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.5	ug/kg	1
Styrene	100-42-5	8260B	ND		6.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.5	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.5	ug/kg	1
Toluene	108-88-3	8260B	ND		6.5	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.5	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.5	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.5	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-004
Description: SED-20	Matrix: Solid
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 13.6 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1431	JM1		23498	3.84

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.5	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.5	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	53-142
Bromofluorobenzene		84	47-138
Toluene-d8	N	129	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-004
Description: SED-20	Matrix: Solid
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 13.6 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1823	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-004
Description: SED-20	Matrix: Solid
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 13.6 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1823	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		70	24-137
2-Fluorophenol		73	16-136
Nitrobenzene-d5		74	12-144
Phenol-d5		74	26-148
Terphenyl-d14		80	20-127
2,4,6-Tribromophenol		89	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-005
Description: SW-20	Matrix: Aqueous
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/18/2019 0132	MDD		22958

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-005
Description: SW-20	Matrix: Aqueous
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 0159	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-005
Description: SW-20	Matrix: Aqueous
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 0159	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		105	70-130
Toluene-d8		107	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-005
Description: SW-20	Matrix: Aqueous
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1516	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

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 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-005
Description: SW-20	Matrix: Aqueous
Date Sampled: 07/16/2019 1400	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1516	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		34	24-127
Nitrobenzene-d5		67	38-127
Phenol-d5		50	28-128
Terphenyl-d14		40	10-148
2,4,6-Tribromophenol		68	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-006
Description: SED-23	Matrix: Solid
Date Sampled: 07/16/2019 1545	% Solids: 57.4 07/17/2019 0103
Date Received: 07/16/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0701	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-006
Description: SED-23	Matrix: Solid
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 57.4 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1453	JM1		23498	3.53

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	91		28	ug/kg	1
Benzene	71-43-2	8260B	ND		7.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		7.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		7.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		7.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		28	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		7.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		7.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		7.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		7.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		7.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		7.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		7.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		7.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		7.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		7.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		7.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		7.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		7.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		7.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		7.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		7.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		7.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		7.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		7.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		7.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		7.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		7.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		7.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		14	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		7.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		7.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		7.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		7.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		7.1	ug/kg	1
Styrene	100-42-5	8260B	ND		7.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		7.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		7.1	ug/kg	1
Toluene	108-88-3	8260B	ND		7.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		7.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		7.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		7.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		7.1	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-006
Description: SED-23	Matrix: Solid
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 57.4 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1453	JM1		23498	3.53

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		7.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		7.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		7.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		14	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	53-142
Bromofluorobenzene		103	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-006
Description: SED-23	Matrix: Solid
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 57.4 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1847	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-006
Description: SED-23	Matrix: Solid
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 57.4 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1847	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		70	24-137
2-Fluorophenol		68	16-136
Nitrobenzene-d5		73	12-144
Phenol-d5		73	26-148
Terphenyl-d14		80	20-127
2,4,6-Tribromophenol		89	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-007
Description: SW-23	Matrix: Aqueous
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	10	07/18/2019 0133	MDD		22958

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	7.3		0.20	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-007
Description: SW-23	Matrix: Aqueous
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 0223	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-007
Description: SW-23	Matrix: Aqueous
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 0223	STM		23223

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-007
Description: SW-23	Matrix: Aqueous
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1541	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-007
Description: SW-23	Matrix: Aqueous
Date Sampled: 07/16/2019 1545	Project Name: Groundwater
Date Received: 07/16/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1541	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		57	37-129
2-Fluorophenol		37	24-127
Nitrobenzene-d5		62	38-127
Phenol-d5		47	28-128
Terphenyl-d14		45	10-148
2,4,6-Tribromophenol		70	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG16058-008
Description: SED-24	Matrix: Solid
Date Sampled: 07/16/2019 1615	% Solids: 52.2 07/17/2019 0103
Date Received: 07/16/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0717	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.20		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-008
Description: SED-24	Matrix: Solid
Date Sampled: 07/16/2019 1615	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 52.2 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1516	JM1		23498	5.99

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	25		17	ug/kg	1
Benzene	71-43-2	8260B	ND		4.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		17	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.3	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.2	ug/kg	1
Styrene	100-42-5	8260B	ND		4.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.2	ug/kg	1
Toluene	108-88-3	8260B	ND		4.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.2	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

Shealy Environmental Services, Inc.  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-008
Description: SED-24	Matrix: Solid
Date Sampled: 07/16/2019 1615	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 52.2 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1516	JM1		23498	5.99

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		100	53-142
Bromofluorobenzene		105	47-138
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-008
Description: SED-24	Matrix: Solid
Date Sampled: 07/16/2019 1615	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 52.2 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1912	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		310	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		310	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		310	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG16058-008
Description: SED-24	Matrix: Solid
Date Sampled: 07/16/2019 1615	Project Name: Groundwater
Date Received: 07/16/2019	% Solids: 52.2 07/17/2019 0103
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/24/2019 1912	SCD	07/17/2019 1446	22863

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		310	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		310	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		75	24-137
2-Fluorophenol		66	16-136
Nitrobenzene-d5		74	12-144
Phenol-d5		72	26-148
Terphenyl-d14		86	20-127
2,4,6-Tribromophenol		91	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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Chain of Custody  
and  
Miscellaneous Documents



# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: ME0018C-14

Page 1 of 1  
Effective Date: 8/22/18

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: JSH / 07/16/19 Lot #: UG16058

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>19-1020</u> <u>4.5 / 4.5 °C NA / NA °C NA / NA °C NA / NA °C</u>	
Method: <input checked="" type="checkbox"/> Temperature Blank <input 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: <u>phone / email / face-to-face</u> (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (½" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>NA</u>
<b>Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)</b>	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> ml. of circle one: H2SO4, HNO3, HCl, NaOH using SR # <u>NA</u> .	
Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Samples(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: <u>NA</u>	
SR barcode labels applied by: <u>DMN/JSH</u> Date: <u>07/16/19</u>	

Comments: SW-23 collection time on container: 1445, COC: 1545

SW-18 had no collection time on container

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

### Westinghouse Electric Company

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: Groundwater

Lot Number: **UG17072**

Date Completed: 08/02/2019



09/16/2019 11:59 AM

Approved and released by:  
Project Manager: Grant Wilton



The electronic signature above is the equivalent of a handwritten signature.  
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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## **Case Narrative Westinghouse Electric Company Lot Number: UG17072**

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

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: UG17072  
Project Name: Groundwater  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SW-19	Aqueous	07/17/2019 0845	07/17/2019
002	SED-19	Solid	07/17/2019 0845	07/17/2019
003	SW-16	Aqueous	07/17/2019 1030	07/17/2019
004	SED-16	Solid	07/17/2019 1030	07/17/2019
005	SW-14	Aqueous	07/17/2019 1100	07/17/2019
006	SED-14	Solid	07/17/2019 1100	07/17/2019
007	SW-13	Aqueous	07/17/2019 1200	07/17/2019
008	SED-13	Solid	07/17/2019 1200	07/17/2019
009	SW-11	Aqueous	07/17/2019 1345	07/17/2019
010	SED-11	Solid	07/17/2019 1345	07/17/2019
011	SW-12	Aqueous	07/17/2019 1515	07/17/2019
012	SED-12	Solid	07/17/2019 1515	07/17/2019
013	TB-01-071719	Aqueous	07/17/2019	07/17/2019

(13 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary  
 Westinghouse Electric Company  
 Lot Number: UG17072  
 Project Name: Groundwater  
 Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	SED-19	Solid	Nitrate - N (soluble)	9056A	1.2		mg/kg	10
002	SED-19	Solid	Acetone	8260B	48		ug/kg	11
002	SED-19	Solid	2-Butanone (MEK)	8260B	45		ug/kg	11
003	SW-16	Aqueous	Nitrate - N	353.2	0.48		mg/L	15
004	SED-16	Solid	Nitrate - N (soluble)	9056A	2.7		mg/kg	20
005	SW-14	Aqueous	Nitrate - N	353.2	0.63		mg/L	25
006	SED-14	Solid	Acetone	8260B	28		ug/kg	31
006	SED-14	Solid	Benzo(a)anthracene	8270D	13		ug/kg	33
006	SED-14	Solid	Benzo(a)pyrene	8270D	20		ug/kg	33
006	SED-14	Solid	Benzo(b)fluoranthene	8270D	37		ug/kg	33
006	SED-14	Solid	Benzo(g,h,i)perylene	8270D	18		ug/kg	33
006	SED-14	Solid	Benzo(k)fluoranthene	8270D	16		ug/kg	33
006	SED-14	Solid	Chrysene	8270D	21		ug/kg	33
006	SED-14	Solid	Fluoranthene	8270D	36		ug/kg	33
006	SED-14	Solid	Indeno(1,2,3-c,d)pyrene	8270D	15		ug/kg	34
006	SED-14	Solid	Pyrene	8270D	28		ug/kg	34
008	SED-13	Solid	Nitrate - N (soluble)	9056A	0.20		mg/kg	40
008	SED-13	Solid	Acetone	8260B	30		ug/kg	41
008	SED-13	Solid	Anthracene	8270D	14		ug/kg	43
008	SED-13	Solid	Benzo(a)anthracene	8270D	170		ug/kg	43
008	SED-13	Solid	Benzo(a)pyrene	8270D	290		ug/kg	43
008	SED-13	Solid	Benzo(b)fluoranthene	8270D	630		ug/kg	43
008	SED-13	Solid	Benzo(g,h,i)perylene	8270D	190		ug/kg	43
008	SED-13	Solid	Benzo(k)fluoranthene	8270D	200		ug/kg	43
008	SED-13	Solid	Chrysene	8270D	310		ug/kg	43
008	SED-13	Solid	Fluoranthene	8270D	570		ug/kg	43
008	SED-13	Solid	Indeno(1,2,3-c,d)pyrene	8270D	170		ug/kg	44
008	SED-13	Solid	Phenanthrene	8270D	130		ug/kg	44
008	SED-13	Solid	Pyrene	8270D	450		ug/kg	44
010	SED-11	Solid	Nitrate - N (soluble)	9056A	0.33		mg/kg	50
010	SED-11	Solid	Acetone	8260B	32		ug/kg	51
012	SED-12	Solid	Nitrate - N (soluble)	9056A	0.24		mg/kg	60
012	SED-12	Solid	Acetone	8260B	110		ug/kg	61
012	SED-12	Solid	2-Butanone (MEK)	8260B	180		ug/kg	61

(34 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-001
Description: SW-19	Matrix: Aqueous
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 0152	MDD		23098

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-001
Description: SW-19	Matrix: Aqueous
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0034	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-001
Description: SW-19	Matrix: Aqueous
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0034	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		92	70-130
Bromofluorobenzene		101	70-130
Toluene-d8		99	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-001
Description: SW-19	Matrix: Aqueous
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1631	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-001
Description: SW-19	Matrix: Aqueous
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1631	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		65	37-129
2-Fluorophenol		39	24-127
Nitrobenzene-d5		64	38-127
Phenol-d5		48	28-128
Terphenyl-d14		41	10-148
2,4,6-Tribromophenol		73	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-002
Description: SED-19	Matrix: Solid
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:
	% Solids: 36.1 07/18/2019 0107

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0806	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	1.2		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-002
Description: SED-19	Matrix: Solid
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 36.1 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1601	JM1		23498	4.82

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	48		21	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	45		21	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.2	ug/kg	1
Styrene	100-42-5	8260B	ND		5.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	ug/kg	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-002
Description: SED-19	Matrix: Solid
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 36.1 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1601	JM1		23498	4.82

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	53-142
Bromofluorobenzene		95	47-138
Toluene-d8		118	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-002
Description: SED-19	Matrix: Solid
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 36.1 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1505	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		67	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		67	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		67	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		67	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		67	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		67	ug/kg	1
Caprolactam	105-60-2	8270D	ND		67	ug/kg	1
Carbazole	86-74-8	8270D	ND		67	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		67	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		67	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		67	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		67	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		67	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		67	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		67	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		67	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		67	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		67	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		67	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		67	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		67	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		67	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		67	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		67	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		67	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		67	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		67	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-002
Description: SED-19	Matrix: Solid
Date Sampled: 07/17/2019 0845	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 36.1 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1505	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		67	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		67	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		67	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		67	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		67	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		67	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		67	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		67	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		67	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	24-137
2-Fluorophenol		65	16-136
Nitrobenzene-d5		60	12-144
Phenol-d5		65	26-148
Terphenyl-d14		73	20-127
2,4,6-Tribromophenol		78	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-003
Description: SW-16	Matrix: Aqueous
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 0153	MDD		23098

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	0.48		0.020	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-003
Description: SW-16	Matrix: Aqueous
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0057	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-003
Description: SW-16	Matrix: Aqueous
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0057	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		88	70-130
Toluene-d8		92	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-003
Description: SW-16	Matrix: Aqueous
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1656	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-003
Description: SW-16	Matrix: Aqueous
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1656	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		67	37-129
2-Fluorophenol		40	24-127
Nitrobenzene-d5		65	38-127
Phenol-d5		55	28-128
Terphenyl-d14		79	10-148
2,4,6-Tribromophenol		77	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-004
Description: SED-16	Matrix: Solid
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:
	% Solids: 75.6 07/18/2019 0107

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/31/2019 2125	HKL		24497

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	2.7		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-004
Description: SED-16	Matrix: Solid
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 75.6 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1623	JM1		23498	6.10

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		16	ug/kg	1
Benzene	71-43-2	8260B	ND		4.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		16	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.2	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.2	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.1	ug/kg	1
Styrene	100-42-5	8260B	ND		4.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.1	ug/kg	1
Toluene	108-88-3	8260B	ND		4.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.1	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-004
Description: SED-16	Matrix: Solid
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 75.6 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1623	JM1		23498	6.10

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		104	47-138
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UG17072-004

Description: SED-16

Matrix: Solid

Date Sampled: 07/17/2019 1030

Project Name: Groundwater

% Solids: 75.6 07/18/2019 0107

Date Received: 07/17/2019

Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1531	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation

B = Detected in the method blank

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ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-004
Description: SED-16	Matrix: Solid
Date Sampled: 07/17/2019 1030	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 75.6 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1531	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		64	24-137
2-Fluorophenol		68	16-136
Nitrobenzene-d5		64	12-144
Phenol-d5		69	26-148
Terphenyl-d14		78	20-127
2,4,6-Tribromophenol		79	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-005
Description: SW-14	Matrix: Aqueous
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 0155	MDD		23098

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	0.63		0.020	mg/L	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-005
Description: SW-14	Matrix: Aqueous
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0121	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-005
Description: SW-14	Matrix: Aqueous
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0121	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		92	70-130
Bromofluorobenzene		94	70-130
Toluene-d8		94	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-005
Description: SW-14	Matrix: Aqueous
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1721	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-005
Description: SW-14	Matrix: Aqueous
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1721	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	37-129
2-Fluorophenol		38	24-127
Nitrobenzene-d5		63	38-127
Phenol-d5		49	28-128
Terphenyl-d14		64	10-148
2,4,6-Tribromophenol		61	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-006
Description: SED-14	Matrix: Solid
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:
	% Solids: 76.0 07/18/2019 0107

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/31/2019 2141	HKL		24497

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-006
Description: SED-14	Matrix: Solid
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 76.0 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1646	JM1		23498	5.73

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	28		17	ug/kg	1
Benzene	71-43-2	8260B	ND		4.4	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.4	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.4	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		17	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.4	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.4	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.4	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.4	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.4	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.4	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.4	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.4	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.4	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.4	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.4	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.4	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.4	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.4	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.4	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.4	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.4	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.4	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.4	ug/kg	1
Styrene	100-42-5	8260B	ND		4.4	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.4	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.4	ug/kg	1
Toluene	108-88-3	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.4	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.4	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.4	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-006
Description: SED-14	Matrix: Solid
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 76.0 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1646	JM1		23498	5.73

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.4	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.4	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		104	47-138
Toluene-d8		107	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-006
Description: SED-14	Matrix: Solid
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 76.0 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1621	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	13		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	20		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	37		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	18		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	16		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	21		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		310	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		310	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	36		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		310	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-006
Description: SED-14	Matrix: Solid
Date Sampled: 07/17/2019 1100	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 76.0 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1621	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	15		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		310	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		310	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	28		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		59	24-137
2-Fluorophenol		60	16-136
Nitrobenzene-d5		57	12-144
Phenol-d5		63	26-148
Terphenyl-d14		75	20-127
2,4,6-Tribromophenol		77	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-007
Description: SW-13	Matrix: Aqueous
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 0156	MDD		23098

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-007
Description: SW-13	Matrix: Aqueous
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0144	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-007
Description: SW-13	Matrix: Aqueous
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/21/2019 0144	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		92	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		97	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-007
Description: SW-13	Matrix: Aqueous
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1746	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-007
Description: SW-13	Matrix: Aqueous
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1746	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		61	37-129
2-Fluorophenol		40	24-127
Nitrobenzene-d5		62	38-127
Phenol-d5		47	28-128
Terphenyl-d14		68	10-148
2,4,6-Tribromophenol		66	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-008
Description: SED-13	Matrix: Solid
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:
	% Solids: 55.7 07/18/2019 0107

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0822	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.20		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-008
Description: SED-13	Matrix: Solid
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 55.7 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1709	JM1		23498	4.13

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	30		24	ug/kg	1
Benzene	71-43-2	8260B	ND		6.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		24	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.1	ug/kg	1
Styrene	100-42-5	8260B	ND		6.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.1	ug/kg	1
Toluene	108-88-3	8260B	ND		6.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.1	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-008
Description: SED-13	Matrix: Solid
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 55.7 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1709	JM1		23498	4.13

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		99	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-008
Description: SED-13	Matrix: Solid
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 55.7 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1646	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	14		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	170		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	290		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	630		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	190		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	200		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	310		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	570		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-008
Description: SED-13	Matrix: Solid
Date Sampled: 07/17/2019 1200	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 55.7 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1646	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	170		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	130		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	450		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		58	24-137
2-Fluorophenol		66	16-136
Nitrobenzene-d5		51	12-144
Phenol-d5		66	26-148
Terphenyl-d14		66	20-127
2,4,6-Tribromophenol		67	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-009
Description: SW-11	Matrix: Aqueous
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 0157	MDD		23098

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-009
Description: SW-11	Matrix: Aqueous
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1635	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-009
Description: SW-11	Matrix: Aqueous
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1635	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Bromofluorobenzene		103	70-130
Toluene-d8		104	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-009
Description: SW-11	Matrix: Aqueous
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1812	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-009
Description: SW-11	Matrix: Aqueous
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1812	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		63	37-129
2-Fluorophenol		42	24-127
Nitrobenzene-d5		64	38-127
Phenol-d5		50	28-128
Terphenyl-d14		38	10-148
2,4,6-Tribromophenol		69	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-010
Description: SED-11	Matrix: Solid
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:
	% Solids: 35.5 07/18/2019 0107

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/31/2019 2158	HKL		24497

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.33		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-010
Description: SED-11	Matrix: Solid
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 35.5 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1839	JM1		23498	4.00

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	32		25	ug/kg	1
Benzene	71-43-2	8260B	ND		6.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		25	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.3	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.3	ug/kg	1
Styrene	100-42-5	8260B	ND		6.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.3	ug/kg	1
Toluene	108-88-3	8260B	ND		6.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.3	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-010
Description: SED-11	Matrix: Solid
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 35.5 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1839	JM1		23498	4.00

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	53-142
Bromofluorobenzene		95	47-138
Toluene-d8		116	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-010
Description: SED-11	Matrix: Solid
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 35.5 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1711	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-010
Description: SED-11	Matrix: Solid
Date Sampled: 07/17/2019 1345	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 35.5 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1711	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		61	24-137
2-Fluorophenol		68	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		69	26-148
Terphenyl-d14		67	20-127
2,4,6-Tribromophenol		71	27-128

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-011
Description: SW-12	Matrix: Aqueous
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 0159	MDD		23098

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-011
Description: SW-12	Matrix: Aqueous
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1127	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-011
Description: SW-12	Matrix: Aqueous
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1127	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		105	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-011
Description: SW-12	Matrix: Aqueous
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1837	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-011
Description: SW-12	Matrix: Aqueous
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1837	SCD	07/18/2019 1700	23005

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		66	37-129
2-Fluorophenol		36	24-127
Nitrobenzene-d5		64	38-127
Phenol-d5		51	28-128
Terphenyl-d14		66	10-148
2,4,6-Tribromophenol		71	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG17072-012
Description: SED-12	Matrix: Solid
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:
	% Solids: 35.2 07/18/2019 0107

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N ) 9056A	1	07/30/2019 0838	GMH		24362

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.24		0.20	mg/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-012
Description: SED-12	Matrix: Solid
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 35.2 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1902	JM1		23498	4.44

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	110		23	ug/kg	1
Benzene	71-43-2	8260B	ND		5.6	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.6	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.6	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.6	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	180		23	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.6	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.6	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.6	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.6	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.6	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.6	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.6	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.6	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.6	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.6	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.6	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.6	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.6	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.6	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.6	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.6	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.6	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.6	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.6	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.6	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.6	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.6	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.6	ug/kg	1
Styrene	100-42-5	8260B	ND		5.6	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.6	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.6	ug/kg	1
Toluene	108-88-3	8260B	ND		5.6	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.6	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.6	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.6	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.6	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-012
Description: SED-12	Matrix: Solid
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:
	% Solids: 35.2 07/18/2019 0107

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/23/2019 1902	JM1		23498	4.44

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.6	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.6	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		95	53-142
Bromofluorobenzene		95	47-138
Toluene-d8		116	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-012
Description: SED-12	Matrix: Solid
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 35.2 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1736	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		67	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		67	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		67	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		67	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		67	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		67	ug/kg	1
Caprolactam	105-60-2	8270D	ND		67	ug/kg	1
Carbazole	86-74-8	8270D	ND		67	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		67	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		67	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		67	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		67	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		67	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		67	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		67	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		67	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		67	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		67	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		67	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		67	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		67	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		67	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		67	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		67	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		67	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		67	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		67	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-012
Description: SED-12	Matrix: Solid
Date Sampled: 07/17/2019 1515	Project Name: Groundwater
Date Received: 07/17/2019	% Solids: 35.2 07/18/2019 0107
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1736	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		67	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		67	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		67	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		67	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		67	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		67	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		67	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		67	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		67	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		60	24-137
2-Fluorophenol		67	16-136
Nitrobenzene-d5		56	12-144
Phenol-d5		75	26-148
Terphenyl-d14		67	20-127
2,4,6-Tribromophenol		70	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-013
Description: TB-01-071719	Matrix: Aqueous
Date Sampled: 07/17/2019	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 1933	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG17072-013
Description: TB-01-071719	Matrix: Aqueous
Date Sampled: 07/17/2019	Project Name: Groundwater
Date Received: 07/17/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/20/2019 1933	STM		23248

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		91	70-130
Bromofluorobenzene		97	70-130
Toluene-d8		97	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

Shealy Environmental Services, Inc.  
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

## QC Summary

# Inorganic non-metals - MB

Sample ID: UQ23098-001

Matrix: Aqueous

Batch: 23098

Analytical Method: 353.2

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N	ND		1	0.020	mg/L	07/19/2019 0139

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Data for Lot Number: UG17072

# Inorganic non-metals - LCS

Sample ID: UQ23098-002

Matrix: Aqueous

Batch: 23098

Analytical Method: 353.2

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.77		1	96	90-110	07/19/2019 0140

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ23248-001

Matrix: Aqueous

Batch: 23248

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	07/20/2019 1745
Benzene	ND		1	1.0	ug/L	07/20/2019 1745
Bromodichloromethane	ND		1	1.0	ug/L	07/20/2019 1745
Bromoform	ND		1	1.0	ug/L	07/20/2019 1745
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	07/20/2019 1745
2-Butanone (MEK)	ND		1	10	ug/L	07/20/2019 1745
Carbon disulfide	ND		1	1.0	ug/L	07/20/2019 1745
Carbon tetrachloride	ND		1	1.0	ug/L	07/20/2019 1745
Chlorobenzene	ND		1	1.0	ug/L	07/20/2019 1745
Chloroethane	ND		1	2.0	ug/L	07/20/2019 1745
Chloroform	ND		1	1.0	ug/L	07/20/2019 1745
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	07/20/2019 1745
Cyclohexane	ND		1	1.0	ug/L	07/20/2019 1745
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	07/20/2019 1745
Dibromochloromethane	ND		1	1.0	ug/L	07/20/2019 1745
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	07/20/2019 1745
1,2-Dichlorobenzene	ND		1	1.0	ug/L	07/20/2019 1745
1,3-Dichlorobenzene	ND		1	1.0	ug/L	07/20/2019 1745
1,4-Dichlorobenzene	ND		1	1.0	ug/L	07/20/2019 1745
Dichlorodifluoromethane	ND		1	2.0	ug/L	07/20/2019 1745
1,1-Dichloroethane	ND		1	1.0	ug/L	07/20/2019 1745
1,2-Dichloroethane	ND		1	1.0	ug/L	07/20/2019 1745
1,1-Dichloroethene	ND		1	1.0	ug/L	07/20/2019 1745
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	07/20/2019 1745
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	07/20/2019 1745
1,2-Dichloropropane	ND		1	1.0	ug/L	07/20/2019 1745
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	07/20/2019 1745
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	07/20/2019 1745
Ethylbenzene	ND		1	1.0	ug/L	07/20/2019 1745
2-Hexanone	ND		1	10	ug/L	07/20/2019 1745
Isopropylbenzene	ND		1	1.0	ug/L	07/20/2019 1745
Methyl acetate	ND		1	1.0	ug/L	07/20/2019 1745
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	07/20/2019 1745
4-Methyl-2-pentanone	ND		1	10	ug/L	07/20/2019 1745
Methylcyclohexane	ND		1	5.0	ug/L	07/20/2019 1745
Methylene chloride	ND		1	1.0	ug/L	07/20/2019 1745
Styrene	ND		1	1.0	ug/L	07/20/2019 1745
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	07/20/2019 1745
Tetrachloroethene	ND		1	1.0	ug/L	07/20/2019 1745
Toluene	ND		1	1.0	ug/L	07/20/2019 1745
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	07/20/2019 1745
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	07/20/2019 1745
1,1,1-Trichloroethane	ND		1	1.0	ug/L	07/20/2019 1745
1,1,2-Trichloroethane	ND		1	1.0	ug/L	07/20/2019 1745

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ23248-001

Matrix: Aqueous

Batch: 23248

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	07/20/2019 1745
Trichlorofluoromethane	ND		1	1.0	ug/L	07/20/2019 1745
Vinyl chloride	ND		1	1.0	ug/L	07/20/2019 1745
Xylenes (total)	ND		1	1.0	ug/L	07/20/2019 1745
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		91	70-130			
Bromofluorobenzene		90	70-130			
Toluene-d8		96	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23248-002

Matrix: Aqueous

Batch: 23248

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	116	60-140	07/20/2019 1640
Benzene	50	45		1	89	70-130	07/20/2019 1640
Bromodichloromethane	50	43		1	87	70-130	07/20/2019 1640
Bromoform	50	45		1	90	70-130	07/20/2019 1640
Bromomethane (Methyl bromide)	50	39		1	78	70-130	07/20/2019 1640
2-Butanone (MEK)	100	100		1	102	70-130	07/20/2019 1640
Carbon disulfide	50	42		1	84	70-130	07/20/2019 1640
Carbon tetrachloride	50	42		1	84	70-130	07/20/2019 1640
Chlorobenzene	50	44		1	87	70-130	07/20/2019 1640
Chloroethane	50	43		1	85	70-130	07/20/2019 1640
Chloroform	50	42		1	85	70-130	07/20/2019 1640
Chloromethane (Methyl chloride)	50	39		1	77	60-140	07/20/2019 1640
Cyclohexane	50	37		1	74	70-130	07/20/2019 1640
1,2-Dibromo-3-chloropropane (DBCP)	50	40		1	79	70-130	07/20/2019 1640
Dibromochloromethane	50	46		1	92	70-130	07/20/2019 1640
1,2-Dibromoethane (EDB)	50	46		1	91	70-130	07/20/2019 1640
1,2-Dichlorobenzene	50	41		1	82	70-130	07/20/2019 1640
1,3-Dichlorobenzene	50	40		1	80	70-130	07/20/2019 1640
1,4-Dichlorobenzene	50	38		1	76	70-130	07/20/2019 1640
Dichlorodifluoromethane	50	45		1	90	60-140	07/20/2019 1640
1,1-Dichloroethane	50	43		1	85	70-130	07/20/2019 1640
1,2-Dichloroethane	50	43		1	86	70-130	07/20/2019 1640
1,1-Dichloroethene	50	47		1	94	70-130	07/20/2019 1640
cis-1,2-Dichloroethene	50	43		1	86	70-130	07/20/2019 1640
trans-1,2-Dichloroethene	50	45		1	90	70-130	07/20/2019 1640
1,2-Dichloropropane	50	43		1	85	70-130	07/20/2019 1640
cis-1,3-Dichloropropene	50	46		1	93	70-130	07/20/2019 1640
trans-1,3-Dichloropropene	50	44		1	88	70-130	07/20/2019 1640
Ethylbenzene	50	44		1	88	70-130	07/20/2019 1640
2-Hexanone	100	82		1	82	70-130	07/20/2019 1640
Isopropylbenzene	50	44		1	88	70-130	07/20/2019 1640
Methyl acetate	50	36		1	72	70-130	07/20/2019 1640
Methyl tertiary butyl ether (MTBE)	50	46		1	92	70-130	07/20/2019 1640
4-Methyl-2-pentanone	100	86		1	86	70-130	07/20/2019 1640
Methylcyclohexane	50	41		1	81	70-130	07/20/2019 1640
Methylene chloride	50	42		1	85	70-130	07/20/2019 1640
Styrene	50	44		1	88	70-130	07/20/2019 1640
1,1,2,2-Tetrachloroethane	50	41		1	83	70-130	07/20/2019 1640
Tetrachloroethene	50	45		1	90	70-130	07/20/2019 1640
Toluene	50	44		1	89	70-130	07/20/2019 1640
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	37		1	74	70-130	07/20/2019 1640
1,2,4-Trichlorobenzene	50	40		1	81	70-130	07/20/2019 1640
1,1,1-Trichloroethane	50	40		1	80	70-130	07/20/2019 1640
1,1,2-Trichloroethane	50	45		1	89	70-130	07/20/2019 1640

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23248-002

Matrix: Aqueous

Batch: 23248

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	46		1	92	70-130	07/20/2019 1640
Trichlorofluoromethane	50	42		1	85	70-130	07/20/2019 1640
Vinyl chloride	50	39		1	78	70-130	07/20/2019 1640
Xylenes (total)	100	89		1	89	70-130	07/20/2019 1640
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		89	70-130				
Bromofluorobenzene		91	70-130				
Toluene-d8		93	70-130				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ23315-001

Matrix: Aqueous

Batch: 23315

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	07/22/2019 1040
Benzene	ND		1	1.0	ug/L	07/22/2019 1040
Bromodichloromethane	ND		1	1.0	ug/L	07/22/2019 1040
Bromoform	ND		1	1.0	ug/L	07/22/2019 1040
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	07/22/2019 1040
2-Butanone (MEK)	ND		1	10	ug/L	07/22/2019 1040
Carbon disulfide	ND		1	1.0	ug/L	07/22/2019 1040
Carbon tetrachloride	ND		1	1.0	ug/L	07/22/2019 1040
Chlorobenzene	ND		1	1.0	ug/L	07/22/2019 1040
Chloroethane	ND		1	2.0	ug/L	07/22/2019 1040
Chloroform	ND		1	1.0	ug/L	07/22/2019 1040
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	07/22/2019 1040
Cyclohexane	ND		1	1.0	ug/L	07/22/2019 1040
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	07/22/2019 1040
Dibromochloromethane	ND		1	1.0	ug/L	07/22/2019 1040
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	07/22/2019 1040
1,2-Dichlorobenzene	ND		1	1.0	ug/L	07/22/2019 1040
1,3-Dichlorobenzene	ND		1	1.0	ug/L	07/22/2019 1040
1,4-Dichlorobenzene	ND		1	1.0	ug/L	07/22/2019 1040
Dichlorodifluoromethane	ND		1	2.0	ug/L	07/22/2019 1040
1,1-Dichloroethane	ND		1	1.0	ug/L	07/22/2019 1040
1,2-Dichloroethane	ND		1	1.0	ug/L	07/22/2019 1040
1,1-Dichloroethene	ND		1	1.0	ug/L	07/22/2019 1040
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	07/22/2019 1040
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	07/22/2019 1040
1,2-Dichloropropane	ND		1	1.0	ug/L	07/22/2019 1040
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	07/22/2019 1040
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	07/22/2019 1040
Ethylbenzene	ND		1	1.0	ug/L	07/22/2019 1040
2-Hexanone	ND		1	10	ug/L	07/22/2019 1040
Isopropylbenzene	ND		1	1.0	ug/L	07/22/2019 1040
Methyl acetate	ND		1	1.0	ug/L	07/22/2019 1040
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	07/22/2019 1040
4-Methyl-2-pentanone	ND		1	10	ug/L	07/22/2019 1040
Methylcyclohexane	ND		1	5.0	ug/L	07/22/2019 1040
Methylene chloride	ND		1	1.0	ug/L	07/22/2019 1040
Styrene	ND		1	1.0	ug/L	07/22/2019 1040
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	07/22/2019 1040
Tetrachloroethene	ND		1	1.0	ug/L	07/22/2019 1040
Toluene	ND		1	1.0	ug/L	07/22/2019 1040
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	07/22/2019 1040
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	07/22/2019 1040
1,1,1-Trichloroethane	ND		1	1.0	ug/L	07/22/2019 1040
1,1,2-Trichloroethane	ND		1	1.0	ug/L	07/22/2019 1040

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ23315-001

Matrix: Aqueous

Batch: 23315

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	07/22/2019 1040
Trichlorofluoromethane	ND		1	1.0	ug/L	07/22/2019 1040
Vinyl chloride	ND		1	1.0	ug/L	07/22/2019 1040
Xylenes (total)	ND		1	1.0	ug/L	07/22/2019 1040
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		100	70-130			
Bromofluorobenzene		107	70-130			
Toluene-d8		105	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23315-002

Matrix: Aqueous

Batch: 23315

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	119	60-140	07/22/2019 0931
Benzene	50	51		1	103	70-130	07/22/2019 0931
Bromodichloromethane	50	52		1	104	70-130	07/22/2019 0931
Bromoform	50	51		1	103	70-130	07/22/2019 0931
Bromomethane (Methyl bromide)	50	55		1	110	70-130	07/22/2019 0931
2-Butanone (MEK)	100	120		1	116	70-130	07/22/2019 0931
Carbon disulfide	50	54		1	107	70-130	07/22/2019 0931
Carbon tetrachloride	50	54		1	108	70-130	07/22/2019 0931
Chlorobenzene	50	49		1	98	70-130	07/22/2019 0931
Chloroethane	50	58		1	116	70-130	07/22/2019 0931
Chloroform	50	51		1	103	70-130	07/22/2019 0931
Chloromethane (Methyl chloride)	50	42		1	83	60-140	07/22/2019 0931
Cyclohexane	50	52		1	104	70-130	07/22/2019 0931
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	99	70-130	07/22/2019 0931
Dibromochloromethane	50	53		1	107	70-130	07/22/2019 0931
1,2-Dibromoethane (EDB)	50	50		1	99	70-130	07/22/2019 0931
1,2-Dichlorobenzene	50	47		1	94	70-130	07/22/2019 0931
1,3-Dichlorobenzene	50	47		1	95	70-130	07/22/2019 0931
1,4-Dichlorobenzene	50	47		1	94	70-130	07/22/2019 0931
Dichlorodifluoromethane	50	35		1	70	60-140	07/22/2019 0931
1,1-Dichloroethane	50	52		1	104	70-130	07/22/2019 0931
1,2-Dichloroethane	50	50		1	99	70-130	07/22/2019 0931
1,1-Dichloroethene	50	58		1	116	70-130	07/22/2019 0931
cis-1,2-Dichloroethene	50	51		1	102	70-130	07/22/2019 0931
trans-1,2-Dichloroethene	50	54		1	109	70-130	07/22/2019 0931
1,2-Dichloropropane	50	50		1	101	70-130	07/22/2019 0931
cis-1,3-Dichloropropene	50	54		1	108	70-130	07/22/2019 0931
trans-1,3-Dichloropropene	50	54		1	109	70-130	07/22/2019 0931
Ethylbenzene	50	51		1	102	70-130	07/22/2019 0931
2-Hexanone	100	97		1	97	70-130	07/22/2019 0931
Isopropylbenzene	50	53		1	106	70-130	07/22/2019 0931
Methyl acetate	50	55		1	110	70-130	07/22/2019 0931
Methyl tertiary butyl ether (MTBE)	50	53		1	106	70-130	07/22/2019 0931
4-Methyl-2-pentanone	100	100		1	100	70-130	07/22/2019 0931
Methylcyclohexane	50	52		1	104	70-130	07/22/2019 0931
Methylene chloride	50	52		1	104	70-130	07/22/2019 0931
Styrene	50	52		1	104	70-130	07/22/2019 0931
1,1,2,2-Tetrachloroethane	50	51		1	102	70-130	07/22/2019 0931
Tetrachloroethene	50	52		1	103	70-130	07/22/2019 0931
Toluene	50	51		1	102	70-130	07/22/2019 0931
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49		1	99	70-130	07/22/2019 0931
1,2,4-Trichlorobenzene	50	49		1	99	70-130	07/22/2019 0931
1,1,1-Trichloroethane	50	53		1	105	70-130	07/22/2019 0931
1,1,2-Trichloroethane	50	51		1	103	70-130	07/22/2019 0931

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23315-002

Matrix: Aqueous

Batch: 23315

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	99	70-130	07/22/2019 0931
Trichlorofluoromethane	50	53		1	105	70-130	07/22/2019 0931
Vinyl chloride	50	43		1	86	70-130	07/22/2019 0931
Xylenes (total)	100	100		1	105	70-130	07/22/2019 0931
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		100			70-130		
Bromofluorobenzene		105			70-130		
Toluene-d8		105			70-130		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ23498-001

Matrix: Solid

Batch: 23498

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	07/23/2019 1001
Benzene	ND		1	5.0	ug/kg	07/23/2019 1001
Bromodichloromethane	ND		1	5.0	ug/kg	07/23/2019 1001
Bromoform	ND		1	5.0	ug/kg	07/23/2019 1001
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	07/23/2019 1001
2-Butanone (MEK)	ND		1	20	ug/kg	07/23/2019 1001
Carbon disulfide	ND		1	5.0	ug/kg	07/23/2019 1001
Carbon tetrachloride	ND		1	5.0	ug/kg	07/23/2019 1001
Chlorobenzene	ND		1	5.0	ug/kg	07/23/2019 1001
Chloroethane	ND		1	5.0	ug/kg	07/23/2019 1001
Chloroform	ND		1	5.0	ug/kg	07/23/2019 1001
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	07/23/2019 1001
Cyclohexane	ND		1	5.0	ug/kg	07/23/2019 1001
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	07/23/2019 1001
Dibromochloromethane	ND		1	5.0	ug/kg	07/23/2019 1001
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	07/23/2019 1001
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	07/23/2019 1001
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	07/23/2019 1001
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	07/23/2019 1001
Dichlorodifluoromethane	ND		1	5.0	ug/kg	07/23/2019 1001
1,1-Dichloroethane	ND		1	5.0	ug/kg	07/23/2019 1001
1,2-Dichloroethane	ND		1	5.0	ug/kg	07/23/2019 1001
1,1-Dichloroethene	ND		1	5.0	ug/kg	07/23/2019 1001
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	07/23/2019 1001
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	07/23/2019 1001
1,2-Dichloropropane	ND		1	5.0	ug/kg	07/23/2019 1001
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	07/23/2019 1001
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	07/23/2019 1001
Ethylbenzene	ND		1	5.0	ug/kg	07/23/2019 1001
2-Hexanone	ND		1	10	ug/kg	07/23/2019 1001
Isopropylbenzene	ND		1	5.0	ug/kg	07/23/2019 1001
Methyl acetate	ND		1	5.0	ug/kg	07/23/2019 1001
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	07/23/2019 1001
4-Methyl-2-pentanone	ND		1	10	ug/kg	07/23/2019 1001
Methylcyclohexane	ND		1	5.0	ug/kg	07/23/2019 1001
Methylene chloride	ND		1	5.0	ug/kg	07/23/2019 1001
Styrene	ND		1	5.0	ug/kg	07/23/2019 1001
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	07/23/2019 1001
Tetrachloroethene	ND		1	5.0	ug/kg	07/23/2019 1001
Toluene	ND		1	5.0	ug/kg	07/23/2019 1001
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	07/23/2019 1001
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	07/23/2019 1001
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	07/23/2019 1001
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	07/23/2019 1001

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ23498-001

Matrix: Solid

Batch: 23498

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	07/23/2019 1001
Trichlorofluoromethane	ND		1	5.0	ug/kg	07/23/2019 1001
Vinyl chloride	ND		1	5.0	ug/kg	07/23/2019 1001
Xylenes (total)	ND		1	10	ug/kg	07/23/2019 1001
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		98	53-142			
Bromofluorobenzene		107	47-138			
Toluene-d8		104	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23498-002

Matrix: Solid

Batch: 23498

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	101	60-140	07/23/2019 0938
Benzene	50	49		1	99	70-130	07/23/2019 0938
Bromodichloromethane	50	51		1	101	70-130	07/23/2019 0938
Bromoform	50	50		1	101	70-130	07/23/2019 0938
Bromomethane (Methyl bromide)	50	47		1	93	70-130	07/23/2019 0938
2-Butanone (MEK)	100	110		1	106	60-140	07/23/2019 0938
Carbon disulfide	50	48		1	97	70-130	07/23/2019 0938
Carbon tetrachloride	50	49		1	98	70-130	07/23/2019 0938
Chlorobenzene	50	49		1	99	70-130	07/23/2019 0938
Chloroethane	50	49		1	98	70-130	07/23/2019 0938
Chloroform	50	49		1	97	70-130	07/23/2019 0938
Chloromethane (Methyl chloride)	50	43		1	86	60-140	07/23/2019 0938
Cyclohexane	50	46		1	92	70-130	07/23/2019 0938
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	100	70-130	07/23/2019 0938
Dibromochloromethane	50	53		1	105	70-130	07/23/2019 0938
1,2-Dibromoethane (EDB)	50	52		1	104	70-130	07/23/2019 0938
1,2-Dichlorobenzene	50	50		1	101	70-130	07/23/2019 0938
1,3-Dichlorobenzene	50	50		1	100	70-130	07/23/2019 0938
1,4-Dichlorobenzene	50	49		1	99	70-130	07/23/2019 0938
Dichlorodifluoromethane	50	41		1	82	60-140	07/23/2019 0938
1,1-Dichloroethane	50	48		1	96	70-130	07/23/2019 0938
1,2-Dichloroethane	50	51		1	101	70-130	07/23/2019 0938
1,1-Dichloroethene	50	52		1	104	70-130	07/23/2019 0938
cis-1,2-Dichloroethene	50	49		1	98	70-130	07/23/2019 0938
trans-1,2-Dichloroethene	50	52		1	104	70-130	07/23/2019 0938
1,2-Dichloropropane	50	49		1	98	70-130	07/23/2019 0938
cis-1,3-Dichloropropene	50	50		1	100	70-130	07/23/2019 0938
trans-1,3-Dichloropropene	50	53		1	106	70-130	07/23/2019 0938
Ethylbenzene	50	51		1	101	70-130	07/23/2019 0938
2-Hexanone	100	110		1	109	70-130	07/23/2019 0938
Isopropylbenzene	50	52		1	103	70-130	07/23/2019 0938
Methyl acetate	50	38		1	75	70-130	07/23/2019 0938
Methyl tertiary butyl ether (MTBE)	50	49		1	98	70-130	07/23/2019 0938
4-Methyl-2-pentanone	100	98		1	98	70-130	07/23/2019 0938
Methylcyclohexane	50	48		1	96	70-130	07/23/2019 0938
Methylene chloride	50	50		1	101	70-130	07/23/2019 0938
Styrene	50	50		1	99	70-130	07/23/2019 0938
1,1,2,2-Tetrachloroethane	50	53		1	107	70-130	07/23/2019 0938
Tetrachloroethene	50	52		1	103	70-130	07/23/2019 0938
Toluene	50	48		1	96	70-130	07/23/2019 0938
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	45		1	90	70-130	07/23/2019 0938
1,2,4-Trichlorobenzene	50	51		1	103	70-130	07/23/2019 0938
1,1,1-Trichloroethane	50	48		1	96	70-130	07/23/2019 0938
1,1,2-Trichloroethane	50	51		1	102	70-130	07/23/2019 0938

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23498-002

Matrix: Solid

Batch: 23498

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	48		1	97	70-130	07/23/2019 0938
Trichlorofluoromethane	50	47		1	94	70-130	07/23/2019 0938
Vinyl chloride	50	43		1	86	70-130	07/23/2019 0938
Xylenes (total)	100	100		1	102	70-130	07/23/2019 0938
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		98			53-142		
Bromofluorobenzene		108			47-138		
Toluene-d8		107			68-124		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ23005-001

Matrix: Aqueous

Batch: 23005

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 07/18/2019 1700

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	ug/L	07/24/2019 1131
2,4,5-Trichlorophenol	ND		1	4.0	ug/L	07/24/2019 1131
2,4,6-Trichlorophenol	ND		1	4.0	ug/L	07/24/2019 1131
2,4-Dichlorophenol	ND		1	8.0	ug/L	07/24/2019 1131
2,4-Dimethylphenol	ND		1	4.0	ug/L	07/24/2019 1131
2,4-Dinitrophenol	ND		1	20	ug/L	07/24/2019 1131
2,4-Dinitrotoluene	ND		1	8.0	ug/L	07/24/2019 1131
2,6-Dinitrotoluene	ND		1	8.0	ug/L	07/24/2019 1131
2-Chloronaphthalene	ND		1	4.0	ug/L	07/24/2019 1131
2-Chlorophenol	ND		1	4.0	ug/L	07/24/2019 1131
2-Methylnaphthalene	ND		1	0.80	ug/L	07/24/2019 1131
2-Methylphenol	ND		1	4.0	ug/L	07/24/2019 1131
2-Nitroaniline	ND		1	8.0	ug/L	07/24/2019 1131
2-Nitrophenol	ND		1	4.0	ug/L	07/24/2019 1131
3,3'-Dichlorobenzidine	ND		1	4.0	ug/L	07/24/2019 1131
3+4-Methylphenol	ND		1	4.0	ug/L	07/24/2019 1131
3-Nitroaniline	ND		1	8.0	ug/L	07/24/2019 1131
4,6-Dinitro-2-methylphenol	ND		1	20	ug/L	07/24/2019 1131
4-Bromophenyl phenyl ether	ND		1	4.0	ug/L	07/24/2019 1131
4-Chloro-3-methyl phenol	ND		1	4.0	ug/L	07/24/2019 1131
4-Chloroaniline	ND		1	8.0	ug/L	07/24/2019 1131
4-Chlorophenyl phenyl ether	ND		1	4.0	ug/L	07/24/2019 1131
4-Nitroaniline	ND		1	8.0	ug/L	07/24/2019 1131
4-Nitrophenol	ND		1	20	ug/L	07/24/2019 1131
Acenaphthene	ND		1	0.80	ug/L	07/24/2019 1131
Acenaphthylene	ND		1	0.80	ug/L	07/24/2019 1131
Acetophenone	ND		1	4.0	ug/L	07/24/2019 1131
Anthracene	ND		1	0.80	ug/L	07/24/2019 1131
Atrazine	ND		1	4.0	ug/L	07/24/2019 1131
Benzaldehyde	ND		1	8.0	ug/L	07/24/2019 1131
Benzo(a)anthracene	ND		1	0.80	ug/L	07/24/2019 1131
Benzo(a)pyrene	ND		1	0.80	ug/L	07/24/2019 1131
Benzo(b)fluoranthene	ND		1	0.80	ug/L	07/24/2019 1131
Benzo(g,h,i)perylene	ND		1	0.80	ug/L	07/24/2019 1131
Benzo(k)fluoranthene	ND		1	0.80	ug/L	07/24/2019 1131
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	ug/L	07/24/2019 1131
bis(2-Chloroethoxy)methane	ND		1	4.0	ug/L	07/24/2019 1131
bis(2-Chloroethyl)ether	ND		1	4.0	ug/L	07/24/2019 1131
bis(2-Ethylhexyl)phthalate	ND		1	4.0	ug/L	07/24/2019 1131
Butyl benzyl phthalate	ND		1	4.0	ug/L	07/24/2019 1131
Caprolactam	ND		1	8.0	ug/L	07/24/2019 1131
Carbazole	ND		1	4.0	ug/L	07/24/2019 1131
Chrysene	ND		1	0.80	ug/L	07/24/2019 1131
Dibenzo(a,h)anthracene	ND		1	0.80	ug/L	07/24/2019 1131

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ23005-001

Matrix: Aqueous

Batch: 23005

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 07/18/2019 1700

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Dibenzofuran	ND		1	4.0	ug/L	07/24/2019 1131
Diethylphthalate	ND		1	4.0	ug/L	07/24/2019 1131
Dimethyl phthalate	ND		1	4.0	ug/L	07/24/2019 1131
Di-n-butyl phthalate	ND		1	4.0	ug/L	07/24/2019 1131
Di-n-octylphthalate	ND		1	4.0	ug/L	07/24/2019 1131
Fluoranthene	ND		1	0.80	ug/L	07/24/2019 1131
Fluorene	ND		1	0.80	ug/L	07/24/2019 1131
Hexachlorobenzene	ND		1	4.0	ug/L	07/24/2019 1131
Hexachlorobutadiene	ND		1	4.0	ug/L	07/24/2019 1131
Hexachlorocyclopentadiene	ND		1	20	ug/L	07/24/2019 1131
Hexachloroethane	ND		1	4.0	ug/L	07/24/2019 1131
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	ug/L	07/24/2019 1131
Isophorone	ND		1	4.0	ug/L	07/24/2019 1131
Naphthalene	ND		1	0.80	ug/L	07/24/2019 1131
Nitrobenzene	ND		1	4.0	ug/L	07/24/2019 1131
N-Nitrosodi-n-propylamine	ND		1	4.0	ug/L	07/24/2019 1131
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	ug/L	07/24/2019 1131
Pentachlorophenol	ND		1	20	ug/L	07/24/2019 1131
Phenanthrene	ND		1	0.80	ug/L	07/24/2019 1131
Phenol	ND		1	4.0	ug/L	07/24/2019 1131
Pyrene	ND		1	0.80	ug/L	07/24/2019 1131
Surrogate	Q	% Rec	Acceptance Limit			
2-Fluorobiphenyl		74	37-129			
2-Fluorophenol		47	24-127			
Nitrobenzene-d5		73	38-127			
Phenol-d5		70	28-128			
Terphenyl-d14		93	10-148			
2,4,6-Tribromophenol		82	35-144			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23005-002

Matrix: Aqueous

Batch: 23005

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 07/18/2019 1700

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	27		1	67	30-130	07/24/2019 1156
2,4,5-Trichlorophenol	40	31		1	77	30-123	07/24/2019 1156
2,4,6-Trichlorophenol	40	29		1	73	30-130	07/24/2019 1156
2,4-Dichlorophenol	40	30		1	74	30-121	07/24/2019 1156
2,4-Dimethylphenol	40	26		1	66	20-125	07/24/2019 1156
2,4-Dinitrophenol	80	70		1	87	11-126	07/24/2019 1156
2,4-Dinitrotoluene	40	32		1	80	30-130	07/24/2019 1156
2,6-Dinitrotoluene	40	34		1	84	30-130	07/24/2019 1156
2-Chloronaphthalene	40	28		1	70	30-130	07/24/2019 1156
2-Chlorophenol	40	32		1	79	30-130	07/24/2019 1156
2-Methylnaphthalene	40	27		1	68	40-132	07/24/2019 1156
2-Methylphenol	40	33		1	83	30-130	07/24/2019 1156
2-Nitroaniline	40	33		1	82	30-130	07/24/2019 1156
2-Nitrophenol	40	31		1	77	30-130	07/24/2019 1156
3,3'-Dichlorobenzidine	40	14		1	34	10-126	07/24/2019 1156
3+4-Methylphenol	40	32		1	80	30-130	07/24/2019 1156
3-Nitroaniline	40	26		1	64	30-130	07/24/2019 1156
4,6-Dinitro-2-methylphenol	40	34		1	86	30-130	07/24/2019 1156
4-Bromophenyl phenyl ether	40	28		1	70	30-124	07/24/2019 1156
4-Chloro-3-methyl phenol	40	29		1	73	30-123	07/24/2019 1156
4-Chloroaniline	40	29		1	72	12-157	07/24/2019 1156
4-Chlorophenyl phenyl ether	40	29		1	73	30-121	07/24/2019 1156
4-Nitroaniline	40	32		1	81	30-135	07/24/2019 1156
4-Nitrophenol	80	56		1	70	30-130	07/24/2019 1156
Acenaphthene	40	27		1	68	30-122	07/24/2019 1156
Acenaphthylene	40	28		1	69	30-130	07/24/2019 1156
Acetophenone	40	32		1	80	30-130	07/24/2019 1156
Anthracene	40	28		1	69	30-123	07/24/2019 1156
Atrazine	40	31		1	77	30-130	07/24/2019 1156
Benzaldehyde	40	19		1	47	20-115	07/24/2019 1156
Benzo(a)anthracene	40	29		1	73	40-125	07/24/2019 1156
Benzo(a)pyrene	40	27		1	69	40-128	07/24/2019 1156
Benzo(b)fluoranthene	40	29		1	71	30-130	07/24/2019 1156
Benzo(g,h,i)perylene	40	29		1	74	30-130	07/24/2019 1156
Benzo(k)fluoranthene	40	28		1	71	30-130	07/24/2019 1156
bis (2-Chloro-1-methylethyl) ether	40	29		1	72	30-130	07/24/2019 1156
bis(2-Chloroethoxy)methane	40	28		1	69	30-130	07/24/2019 1156
bis(2-Chloroethyl)ether	40	28		1	70	30-130	07/24/2019 1156
bis(2-Ethylhexyl)phthalate	40	32		1	80	30-130	07/24/2019 1156
Butyl benzyl phthalate	40	32		1	80	30-130	07/24/2019 1156
Caprolactam	40	35		1	87	30-130	07/24/2019 1156
Carbazole	40	27		1	68	30-130	07/24/2019 1156
Chrysene	40	29		1	72	30-130	07/24/2019 1156
Dibenzo(a,h)anthracene	40	28		1	71	30-130	07/24/2019 1156

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23005-002

Matrix: Aqueous

Batch: 23005

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 07/18/2019 1700

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	28		1	71	30-118	07/24/2019 1156
Diethylphthalate	40	29		1	74	40-125	07/24/2019 1156
Dimethyl phthalate	40	30		1	75	40-127	07/24/2019 1156
Di-n-butyl phthalate	40	28		1	71	40-127	07/24/2019 1156
Di-n-octylphthalate	40	27		1	68	30-130	07/24/2019 1156
Fluoranthene	40	28		1	70	40-128	07/24/2019 1156
Fluorene	40	27		1	69	30-124	07/24/2019 1156
Hexachlorobenzene	40	29		1	73	30-125	07/24/2019 1156
Hexachlorobutadiene	40	28		1	71	24-110	07/24/2019 1156
Hexachlorocyclopentadiene	200	120		1	60	22-122	07/24/2019 1156
Hexachloroethane	40	26		1	66	30-130	07/24/2019 1156
Indeno(1,2,3-c,d)pyrene	40	28		1	71	30-130	07/24/2019 1156
Isophorone	40	28		1	70	30-130	07/24/2019 1156
Naphthalene	40	29		1	71	30-130	07/24/2019 1156
Nitrobenzene	40	30		1	74	30-130	07/24/2019 1156
N-Nitrosodi-n-propylamine	40	32		1	79	30-130	07/24/2019 1156
N-Nitrosodiphenylamine (Diphenylamine)	40	28		1	70	30-123	07/24/2019 1156
Pentachlorophenol	80	55		1	69	30-130	07/24/2019 1156
Phenanthrene	40	27		1	67	40-123	07/24/2019 1156
Phenol	40	32		1	79	30-130	07/24/2019 1156
Pyrene	40	30		1	74	40-126	07/24/2019 1156
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		68	37-129				
2-Fluorophenol		72	24-127				
Nitrobenzene-d5		78	38-127				
Phenol-d5		76	28-128				
Terphenyl-d14		83	10-148				
2,4,6-Tribromophenol		80	35-144				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ23488-001

Matrix: Solid

Batch: 23488

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 07/23/2019 1708

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acenaphthene	ND		1	13	ug/kg	07/25/2019 1235
Acenaphthylene	ND		1	13	ug/kg	07/25/2019 1235
Acetophenone	ND		1	67	ug/kg	07/25/2019 1235
Anthracene	ND		1	13	ug/kg	07/25/2019 1235
Atrazine	ND		1	67	ug/kg	07/25/2019 1235
Benzaldehyde	ND		1	67	ug/kg	07/25/2019 1235
Benzo(a)anthracene	ND		1	13	ug/kg	07/25/2019 1235
Benzo(a)pyrene	ND		1	13	ug/kg	07/25/2019 1235
Benzo(b)fluoranthene	ND		1	13	ug/kg	07/25/2019 1235
Benzo(g,h,i)perylene	ND		1	13	ug/kg	07/25/2019 1235
Benzo(k)fluoranthene	ND		1	13	ug/kg	07/25/2019 1235
1,1'-Biphenyl	ND		1	67	ug/kg	07/25/2019 1235
4-Bromophenyl phenyl ether	ND		1	67	ug/kg	07/25/2019 1235
Butyl benzyl phthalate	ND		1	67	ug/kg	07/25/2019 1235
Caprolactam	ND		1	67	ug/kg	07/25/2019 1235
Carbazole	ND		1	67	ug/kg	07/25/2019 1235
bis (2-Chloro-1-methylethyl) ether	ND		1	67	ug/kg	07/25/2019 1235
4-Chloro-3-methyl phenol	ND		1	67	ug/kg	07/25/2019 1235
4-Chloroaniline	ND		1	67	ug/kg	07/25/2019 1235
bis(2-Chloroethoxy)methane	ND		1	67	ug/kg	07/25/2019 1235
bis(2-Chloroethyl)ether	ND		1	67	ug/kg	07/25/2019 1235
2-Chloronaphthalene	ND		1	67	ug/kg	07/25/2019 1235
2-Chlorophenol	ND		1	67	ug/kg	07/25/2019 1235
4-Chlorophenyl phenyl ether	ND		1	67	ug/kg	07/25/2019 1235
Chrysene	ND		1	13	ug/kg	07/25/2019 1235
Dibenzo(a,h)anthracene	ND		1	13	ug/kg	07/25/2019 1235
Dibenzofuran	ND		1	67	ug/kg	07/25/2019 1235
3,3'-Dichlorobenzidine	ND		1	67	ug/kg	07/25/2019 1235
2,4-Dichlorophenol	ND		1	67	ug/kg	07/25/2019 1235
Diethylphthalate	ND		1	67	ug/kg	07/25/2019 1235
Dimethyl phthalate	ND		1	67	ug/kg	07/25/2019 1235
2,4-Dimethylphenol	ND		1	67	ug/kg	07/25/2019 1235
Di-n-butyl phthalate	ND		1	67	ug/kg	07/25/2019 1235
4,6-Dinitro-2-methylphenol	ND		1	330	ug/kg	07/25/2019 1235
2,4-Dinitrophenol	ND		1	330	ug/kg	07/25/2019 1235
2,4-Dinitrotoluene	ND		1	130	ug/kg	07/25/2019 1235
2,6-Dinitrotoluene	ND		1	130	ug/kg	07/25/2019 1235
Di-n-octylphthalate	ND		1	67	ug/kg	07/25/2019 1235
bis(2-Ethylhexyl)phthalate	ND		1	67	ug/kg	07/25/2019 1235
Fluoranthene	ND		1	13	ug/kg	07/25/2019 1235
Fluorene	ND		1	13	ug/kg	07/25/2019 1235
Hexachlorobenzene	ND		1	67	ug/kg	07/25/2019 1235
Hexachlorobutadiene	ND		1	67	ug/kg	07/25/2019 1235
Hexachlorocyclopentadiene	ND		1	330	ug/kg	07/25/2019 1235

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ23488-001

Matrix: Solid

Batch: 23488

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 07/23/2019 1708

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Hexachloroethane	ND		1	67	ug/kg	07/25/2019 1235
Indeno(1,2,3-c,d)pyrene	ND		1	13	ug/kg	07/25/2019 1235
Isophorone	ND		1	67	ug/kg	07/25/2019 1235
2-Methylnaphthalene	ND		1	13	ug/kg	07/25/2019 1235
2-Methylphenol	ND		1	67	ug/kg	07/25/2019 1235
3+4-Methylphenol	ND		1	130	ug/kg	07/25/2019 1235
Naphthalene	ND		1	13	ug/kg	07/25/2019 1235
2-Nitroaniline	ND		1	130	ug/kg	07/25/2019 1235
3-Nitroaniline	ND		1	130	ug/kg	07/25/2019 1235
4-Nitroaniline	ND		1	130	ug/kg	07/25/2019 1235
Nitrobenzene	ND		1	67	ug/kg	07/25/2019 1235
2-Nitrophenol	ND		1	130	ug/kg	07/25/2019 1235
4-Nitrophenol	ND		1	330	ug/kg	07/25/2019 1235
N-Nitrosodi-n-propylamine	ND		1	67	ug/kg	07/25/2019 1235
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	ug/kg	07/25/2019 1235
Pentachlorophenol	ND		1	330	ug/kg	07/25/2019 1235
Phenanthrene	ND		1	13	ug/kg	07/25/2019 1235
Phenol	ND		1	67	ug/kg	07/25/2019 1235
Pyrene	ND		1	13	ug/kg	07/25/2019 1235
2,4,5-Trichlorophenol	ND		1	67	ug/kg	07/25/2019 1235
2,4,6-Trichlorophenol	ND		1	67	ug/kg	07/25/2019 1235

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		69	24-137
2-Fluorophenol		72	16-136
Nitrobenzene-d5		68	12-144
Phenol-d5		69	26-148
Terphenyl-d14		81	20-127
2,4,6-Tribromophenol		78	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23488-002

Matrix: Solid

Batch: 23488

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 07/23/2019 1708

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	670	400		1	60	46-114	07/25/2019 1300
Acenaphthylene	670	420		1	62	44-122	07/25/2019 1300
Acetophenone	670	410		1	61	48-111	07/25/2019 1300
Anthracene	670	420		1	64	50-119	07/25/2019 1300
Atrazine	670	490		1	74	48-116	07/25/2019 1300
Benzaldehyde	670	120		1	18	10-110	07/25/2019 1300
Benzo(a)anthracene	670	440		1	66	47-121	07/25/2019 1300
Benzo(a)pyrene	670	450		1	68	55-134	07/25/2019 1300
Benzo(b)fluoranthene	670	460		1	69	28-139	07/25/2019 1300
Benzo(g,h,i)perylene	670	470		1	71	36-125	07/25/2019 1300
Benzo(k)fluoranthene	670	450		1	68	47-130	07/25/2019 1300
1,1'-Biphenyl	670	410		1	62	49-110	07/25/2019 1300
4-Bromophenyl phenyl ether	670	430		1	64	46-118	07/25/2019 1300
Butyl benzyl phthalate	670	500		1	75	46-128	07/25/2019 1300
Caprolactam	670	510		1	76	43-121	07/25/2019 1300
Carbazole	670	450		1	68	47-128	07/25/2019 1300
bis (2-Chloro-1-methylethyl) ether	670	360		1	55	31-102	07/25/2019 1300
4-Chloro-3-methyl phenol	670	480		1	71	49-118	07/25/2019 1300
4-Chloroaniline	670	380		1	57	17-106	07/25/2019 1300
bis(2-Chloroethoxy)methane	670	440		1	65	39-108	07/25/2019 1300
bis(2-Chloroethyl)ether	670	420		1	63	32-105	07/25/2019 1300
2-Chloronaphthalene	670	420		1	63	31-127	07/25/2019 1300
2-Chlorophenol	670	450		1	67	37-106	07/25/2019 1300
4-Chlorophenyl phenyl ether	670	430		1	65	47-116	07/25/2019 1300
Chrysene	670	440		1	66	45-126	07/25/2019 1300
Dibenzo(a,h)anthracene	670	450		1	67	45-122	07/25/2019 1300
Dibenzofuran	670	420		1	63	45-112	07/25/2019 1300
3,3'-Dichlorobenzidine	670	390		1	58	10-119	07/25/2019 1300
2,4-Dichlorophenol	670	480		1	72	41-113	07/25/2019 1300
Diethylphthalate	670	430		1	64	49-123	07/25/2019 1300
Dimethyl phthalate	670	450		1	67	48-120	07/25/2019 1300
2,4-Dimethylphenol	670	510		1	76	33-123	07/25/2019 1300
Di-n-butyl phthalate	670	430		1	65	51-129	07/25/2019 1300
4,6-Dinitro-2-methylphenol	670	540		1	81	40-130	07/25/2019 1300
2,4-Dinitrophenol	1300	910		1	68	10-113	07/25/2019 1300
2,4-Dinitrotoluene	670	490		1	73	48-124	07/25/2019 1300
2,6-Dinitrotoluene	670	500		1	75	47-125	07/25/2019 1300
Di-n-octylphthalate	670	420		1	63	49-142	07/25/2019 1300
bis(2-Ethylhexyl)phthalate	670	450		1	68	45-128	07/25/2019 1300
Fluoranthene	670	450		1	67	50-123	07/25/2019 1300
Fluorene	670	410		1	61	48-117	07/25/2019 1300
Hexachlorobenzene	670	470		1	70	44-122	07/25/2019 1300
Hexachlorobutadiene	670	460		1	70	33-103	07/25/2019 1300
Hexachlorocyclopentadiene	3300	2300		1	69	18-121	07/25/2019 1300

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ23488-002

Matrix: Solid

Batch: 23488

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 07/23/2019 1708

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	670	400		1	60	30-96	07/25/2019 1300
Indeno(1,2,3-c,d)pyrene	670	450		1	68	45-123	07/25/2019 1300
Isophorone	670	450		1	67	41-113	07/25/2019 1300
2-Methylnaphthalene	670	440		1	66	40-106	07/25/2019 1300
2-Methylphenol	670	510		1	76	32-107	07/25/2019 1300
3+4-Methylphenol	670	520		1	77	39-108	07/25/2019 1300
Naphthalene	670	440		1	66	36-110	07/25/2019 1300
2-Nitroaniline	670	490		1	73	45-123	07/25/2019 1300
3-Nitroaniline	670	370		1	56	24-127	07/25/2019 1300
4-Nitroaniline	670	520		1	78	48-127	07/25/2019 1300
Nitrobenzene	670	470		1	71	33-114	07/25/2019 1300
2-Nitrophenol	670	480		1	72	35-108	07/25/2019 1300
4-Nitrophenol	1300	800		1	60	18-154	07/25/2019 1300
N-Nitrosodi-n-propylamine	670	440		1	65	32-115	07/25/2019 1300
N-Nitrosodiphenylamine (Diphenylamine)	670	460		1	69	53-150	07/25/2019 1300
Pentachlorophenol	1300	880		1	66	27-138	07/25/2019 1300
Phenanthrene	670	420		1	64	49-117	07/25/2019 1300
Phenol	670	460		1	69	36-108	07/25/2019 1300
Pyrene	670	440		1	67	47-119	07/25/2019 1300
2,4,5-Trichlorophenol	670	460		1	69	46-122	07/25/2019 1300
2,4,6-Trichlorophenol	670	450		1	67	38-115	07/25/2019 1300
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		64	24-137				
2-Fluorophenol		64	16-136				
Nitrobenzene-d5		73	12-144				
Phenol-d5		67	26-148				
Terphenyl-d14		74	20-127				
2,4,6-Tribromophenol		79	27-128				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody  
and  
Miscellaneous Documents



**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 097502**

Client: <u>Westinghouse</u> Address: <u>5801 Bluff Rd</u> City: <u>Hopkins</u> State: <u>SC</u> Zip Code: <u>29061</u> Project Name: <u>Westinghouse RF</u> Project No.: <u>60595649.9</u>		Report to Contact: <u>DIANA Joyner</u> Sampler's Signature: <u>[Signature]</u> Printed Name: <u>JAMES CAMPBELL</u>	Telephone No. / E-mail: <u>803 647 1920</u> <u>Joyner@Westinghouse.com</u> Analysis (Attach list if more space is needed):	Guide No. <u>22261</u> Page <u>1</u> of <u>2</u>
Turn Around Time Required (Prior lab approval required for expedited TAT): <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		Possible Hazard Identification: <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Corrosive <input type="checkbox"/> Volatile <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	CC Requirements (Specify) Date Time Date Time Date Time	
1. Requisitioned by: <u>[Signature]</u>		1. Received by: <u>[Signature]</u>		
2. Requisitioned by: <u>[Signature]</u>		2. Received by: <u>[Signature]</u>		
3. Requisitioned by:		3. Received by:		
4. Requisitioned by:		4. Laboratory received by: <u>Davey Nystrom</u> Date: <u>7/17/19</u> Time: <u>1050</u>		
Note: All samples are retained for four weeks from receipt unless other arrangements are made.				
Received on ice (Celsius) <u>5</u> No Ice Pack <u>0</u> Receiving Temp. <u>5</u> °C				

Sample ID / Description (Containers for each sample may be combined on one line.)	Date	Time	Matrix	No. of Containers by Parameter Type								Remarks / Collector ID			
				Asbestos	PCBs	PAHs	PCDD/F	OC	MHC	SVOCs	VOCs				
SW-19	7-17-19	0845	G X						3						
SED-19		0845	G X						3						
SW-16		1030	G X						3						
SED-16		1030	G X						3						
SW-14		1100	G X						3						
SED-14		1100	G X						3						
SW-13		1200	G X						3						
SED-13		1200	G X						3						
SW-11		1345	G X						3						
SED-11		1345	G X						3						



**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 097621**

Client <b>WESTHOUSE</b>		Report to Contact <b>Diana Joyner</b>		Telephone No. / E-mail <b>803-477-1920</b>		Quets No. <b>22261</b>	
Address <b>5801 BUFF RD</b>		Sampler's Signature <i>[Signature]</i>		Analysis (Attach list if more space is needed)		Page <b>2</b> of <b>2</b>	
City <b>Hopkins</b>		Printer Name <b>CHANNIS LEPLAIRE</b>		Barcode 		Remains / Cooler I.D. <b>UG17072</b>	
State <b>SC</b>		Zip Code <b>29061</b>		Project Name <b>WESTHOUSE RI</b>		GTW	
Project No. <b>60595649.9</b>		P.O. No.		No. of Containers by Preservative Type		Remains / Cooler I.D.	
Sample ID / Description (Conditions for each sample may be combined on one line)		Date		Time		GTW	
SW-12		7-17-19		1515		X	
SED-12		7-17-19		1515		X	
TB.01.071719		7-17-19		—		X	

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"/> Disposal by Lab	Possible Hazard Identification		QC Requirements (Specify)	
		<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown			
1. Refrquished by <i>[Signature]</i>	Date 7-17-19	Time 1633	1. Received by		Date 7/17/19
2. Refrquished by	Date	Time	2. Received by		Date
3. Refrquished by	Date	Time	3. Received by		Date
4. Refrquished by	Date	Time	4. Laboratory received by <b>Dawley North</b>		Date 7/17/19

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY  
 Received on ice (Circle)  No  Ice Pack  Reseal Temp. **5.1** °C

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: ME9018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: ASH / 07/17/19 Lot #: UG17072

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>19-1020</u>	
<u>5.1 / 5.1</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: <u>phone / email / face-to-face</u> (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pca-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>NA</u>
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # <u>NA</u>	
Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Samples(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is <i>no</i> ) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: <u>NA</u>	
SR barcode labels applied by: <u>DMN</u> Date: <u>07/17/19</u>	

Comments:

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## **Report of Analysis**

**Westinghouse Electric Company**

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: Groundwater

Lot Number: **UG18083**

Date Completed: 07/29/2019



07/29/2019 4:35 PM

Approved and released by:  
Project Manager: Grant Wilton



The electronic signature above is the equivalent of a handwritten signature.  
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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## **Case Narrative Westinghouse Electric Company Lot Number: UG18083**

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

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: UG18083  
Project Name: Groundwater  
Project Number:

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	EB-01-071819	Aqueous	07/18/2019 0750	07/18/2019
002	EB-02-071819	Aqueous	07/18/2019 0800	07/18/2019
003	SED-25	Solid	07/18/2019 0915	07/18/2019
004	SED-26	Solid	07/18/2019 0940	07/18/2019
005	SED-27	Solid	07/18/2019 1030	07/18/2019
006	SED-28	Solid	07/18/2019 1050	07/18/2019
007	SED17	Solid	07/18/2019 1300	07/18/2019
008	SW-17	Aqueous	07/18/2019 1300	07/18/2019
009	DUP-01-071819 (SED)	Solid	07/18/2019	07/18/2019
010	DUP-01-071819 (SW)	Aqueous	07/18/2019	07/18/2019
011	TB-02-071819	Aqueous	07/18/2019	07/18/2019

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(11 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary  
 Westinghouse Electric Company  
 Lot Number: UG18083  
 Project Name: Groundwater  
 Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	EB-01-071819	Aqueous	Toluene	8260B	1.8		ug/L	6
002	EB-02-071819	Aqueous	Toluene	8260B	1.6		ug/L	11
003	SED-25	Solid	Nitrate - N (soluble)	9056A	0.27		mg/kg	15
004	SED-26	Solid	Nitrate - N (soluble)	9056A	1.4		mg/kg	18
004	SED-26	Solid	Benzo(a)pyrene	8270D	79		ug/kg	19
004	SED-26	Solid	Benzo(b)fluoranthene	8270D	150		ug/kg	19
004	SED-26	Solid	Fluoranthene	8270D	81		ug/kg	19
004	SED-26	Solid	Pyrene	8270D	82		ug/kg	20
005	SED-27	Solid	Nitrate - N (soluble)	9056A	0.30		mg/kg	21
005	SED-27	Solid	bis(2-Ethylhexyl)phthalate	8270D	91		ug/kg	22
006	SED-28	Solid	Anthracene	8270D	110		ug/kg	25
006	SED-28	Solid	Benzo(a)anthracene	8270D	3400		ug/kg	25
006	SED-28	Solid	Benzo(a)pyrene	8270D	3000		ug/kg	25
006	SED-28	Solid	Benzo(b)fluoranthene	8270D	4600		ug/kg	25
006	SED-28	Solid	Benzo(g,h,i)perylene	8270D	1800		ug/kg	25
006	SED-28	Solid	Benzo(k)fluoranthene	8270D	1900		ug/kg	25
006	SED-28	Solid	Chrysene	8270D	3200		ug/kg	25
006	SED-28	Solid	bis(2-Ethylhexyl)phthalate	8270D	270		ug/kg	25
006	SED-28	Solid	Fluoranthene	8270D	7100		ug/kg	25
006	SED-28	Solid	Indeno(1,2,3-c,d)pyrene	8270D	1600		ug/kg	26
006	SED-28	Solid	Phenanthrene	8270D	440		ug/kg	26
006	SED-28	Solid	Pyrene	8270D	5600		ug/kg	26
007	SED17	Solid	Nitrate - N (soluble)	9056A	2.1		mg/kg	27
007	SED17	Solid	Tetrachloroethene	8260B	5.5		ug/kg	28
008	SW-17	Aqueous	Nitrate - N	353.2	3.8		mg/L	32
008	SW-17	Aqueous	Tetrachloroethene	8260B	16		ug/L	33
008	SW-17	Aqueous	Trichloroethene	8260B	1.0		ug/L	34
009	DUP-01-071819 (SED)	Solid	Nitrate - N (soluble)	9056A	0.95		mg/kg	37
010	DUP-01-071819 (SW)	Aqueous	Nitrate - N	353.2	3.8		mg/L	42
010	DUP-01-071819 (SW)	Aqueous	Tetrachloroethene	8260B	16		ug/L	43
010	DUP-01-071819 (SW)	Aqueous	Trichloroethene	8260B	1.0		ug/L	44

(31 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-001
Description: EB-01-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0750	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 2208	MDD		23225

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-001
Description: EB-01-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0750	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1152	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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	1.8		1.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-001
Description: EB-01-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0750	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1152	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UG18083-001

Description: EB-01-071819

Matrix: Aqueous

Date Sampled: 07/18/2019 0750

Project Name: Groundwater

Date Received: 07/18/2019

Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	3520C	8270D	1	07/24/2019 1902	SCD	07/19/2019 1820	23207		
Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run		
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1		
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1		
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1		
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1		
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1		
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1		
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1		
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1		
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1		
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1		
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1		
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1		
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1		
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1		
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1		
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1		
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1		
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1		
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1		

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-001
Description: EB-01-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0750	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1902	SCD	07/19/2019 1820	23207

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		67	37-129
2-Fluorophenol		44	24-127
Nitrobenzene-d5		67	38-127
Phenol-d5		68	28-128
Terphenyl-d14		83	10-148
2,4,6-Tribromophenol		63	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-002
Description: EB-02-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0800	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	07/19/2019 2212	MDD		23225

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-002
Description: EB-02-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0800	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1217	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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	1.6		1.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-002
Description: EB-02-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0800	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1217	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Bromofluorobenzene		104	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UG18083-002

Description: EB-02-071819

Matrix: Aqueous

Date Sampled: 07/18/2019 0800

Project Name: Groundwater

Date Received: 07/18/2019

Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch		
1	3520C	8270D	1	07/24/2019 1927	SCD	07/19/2019 1820	23207		
Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run		
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1		
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1		
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1		
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1		
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1		
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1		
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1		
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1		
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1		
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1		
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1		
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1		
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1		
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1		
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1		
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1		
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1		
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1		
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1		
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1		
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1		
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1		
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1		
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1		
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1		
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1		
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1		
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1		
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1		
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1		
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1		
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1		
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1		
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1		
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1		
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1		
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1		
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1		
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1		
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1		
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1		
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1		
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1		
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1		

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-002
Description: EB-02-071819	Matrix: Aqueous
Date Sampled: 07/18/2019 0800	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1927	SCD	07/19/2019 1820	23207

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		68	37-129
2-Fluorophenol		50	24-127
Nitrobenzene-d5		69	38-127
Phenol-d5		57	28-128
Terphenyl-d14		79	10-148
2,4,6-Tribromophenol		57	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-003
Description: SED-25	Matrix: Solid
Date Sampled: 07/18/2019 0915	% Solids: 11.5 07/19/2019 0132
Date Received: 07/18/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	07/25/2019 0022	GMH		23696

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.27		0.20	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-003
Description: SED-25	Matrix: Solid
Date Sampled: 07/18/2019 0915	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 11.5 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1801	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-003
Description: SED-25	Matrix: Solid
Date Sampled: 07/18/2019 0915	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 11.5 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1801	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		56	24-137
2-Fluorophenol		66	16-136
Nitrobenzene-d5		57	12-144
Phenol-d5		65	26-148
Terphenyl-d14		67	20-127
2,4,6-Tribromophenol		72	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-004
Description: SED-26	Matrix: Solid
Date Sampled: 07/18/2019 0940	% Solids: 64.1 07/19/2019 0132
Date Received: 07/18/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	07/25/2019 0038	GMH		23696

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	1.4		0.20	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-004
Description: SED-26	Matrix: Solid
Date Sampled: 07/18/2019 0940	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 64.1 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	07/26/2019 2132	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		64	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		64	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		64	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		64	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	79		64	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	150		64	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		64	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		64	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		64	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		64	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		630	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		630	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	81		64	ug/kg	1
Fluorene	86-73-7	8270D	ND		64	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-004
Description: SED-26	Matrix: Solid
Date Sampled: 07/18/2019 0940	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 64.1 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	07/26/2019 2132	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		64	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		64	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		630	ug/kg	1
Naphthalene	91-20-3	8270D	ND		64	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		630	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		630	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		630	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		630	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		64	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	82		64	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		74	24-137
2-Fluorophenol		71	16-136
Nitrobenzene-d5		70	12-144
Phenol-d5		69	26-148
Terphenyl-d14		88	20-127
2,4,6-Tribromophenol		82	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-005
Description: SED-27	Matrix: Solid
Date Sampled: 07/18/2019 1030	% Solids: 23.3 07/19/2019 0132
Date Received: 07/18/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	07/25/2019 0054	GMH		23696

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.30		0.20	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-005
Description: SED-27	Matrix: Solid
Date Sampled: 07/18/2019 1030	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 23.3 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1852	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	91		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-005
Description: SED-27	Matrix: Solid
Date Sampled: 07/18/2019 1030	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 23.3 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1852	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	24-137
2-Fluorophenol		67	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		72	26-148
Terphenyl-d14		68	20-127
2,4,6-Tribromophenol		59	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-006
Description: SED-28	Matrix: Solid
Date Sampled: 07/18/2019 1050	% Solids: 25.1 07/19/2019 0132
Date Received: 07/18/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	07/25/2019 0143	GMH		23696

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.20	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-006
Description: SED-28	Matrix: Solid
Date Sampled: 07/18/2019 1050	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 25.1 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1917	SCD	07/23/2019 1708	23488
2	3546	8270D	10	07/26/2019 1509	JCG	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	110		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	3400		130	ug/kg	2
Benzo(a)pyrene	50-32-8	8270D	3000		130	ug/kg	2
Benzo(b)fluoranthene	205-99-2	8270D	4600		130	ug/kg	2
Benzo(g,h,i)perylene	191-24-2	8270D	1800		130	ug/kg	2
Benzo(k)fluoranthene	207-08-9	8270D	1900		130	ug/kg	2
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	3200		130	ug/kg	2
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	270		65	ug/kg	1
Fluoranthene	206-44-0	8270D	7100		130	ug/kg	2
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-006
Description: SED-28	Matrix: Solid
Date Sampled: 07/18/2019 1050	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 25.1 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1917	SCD	07/23/2019 1708	23488
2	3546	8270D	10	07/26/2019 1509	JCG	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	1600		130	ug/kg	2
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	440		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	5600		130	ug/kg	2
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1		Q	Run 2	
		% Recovery	Acceptance Limits		% Recovery	Acceptance Limits
2-Fluorobiphenyl		59	24-137		79	24-137
2-Fluorophenol		55	16-136		100	16-136
Nitrobenzene-d5		56	12-144		91	12-144
Phenol-d5		61	26-148		90	26-148
Terphenyl-d14		59	20-127		106	20-127
2,4,6-Tribromophenol		57	27-128		49	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-007
Description: SED17	Matrix: Solid
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:
	% Solids: 86.2 07/19/2019 0132

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	07/25/2019 0159	GMH		23696

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	2.1		0.20	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-007
Description: SED17	Matrix: Solid
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 86.2 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/25/2019 1517	ECB		23776	5.22

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		19	ug/kg	1
Benzene	71-43-2	8260B	ND		4.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.6	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.6	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.8	ug/kg	1
Styrene	100-42-5	8260B	ND		4.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	5.5		4.8	ug/kg	1
Toluene	108-88-3	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.8	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-007
Description: SED17	Matrix: Solid
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:
	% Solids: 86.2 07/19/2019 0132

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/25/2019 1517	ECB		23776	5.22

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		98	53-142
Bromofluorobenzene		105	47-138
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-007
Description: SED17	Matrix: Solid
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 86.2 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 2007	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		67	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		67	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		67	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		67	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		67	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		67	ug/kg	1
Caprolactam	105-60-2	8270D	ND		67	ug/kg	1
Carbazole	86-74-8	8270D	ND		67	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		67	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		67	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		67	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		67	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		67	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		67	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		67	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		67	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		67	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		67	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		67	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		67	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		67	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		67	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		67	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		67	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		67	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		67	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		67	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-007
Description: SED17	Matrix: Solid
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 86.2 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 2007	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		67	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		67	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		67	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		67	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		67	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		67	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		67	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		67	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		67	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		65	24-137
2-Fluorophenol		72	16-136
Nitrobenzene-d5		64	12-144
Phenol-d5		71	26-148
Terphenyl-d14		71	20-127
2,4,6-Tribromophenol		67	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-008
Description: SW-17	Matrix: Aqueous
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/19/2019 2220	MDD		23225

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	3.8		0.040	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-008
Description: SW-17	Matrix: Aqueous
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1241	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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	16		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-008
Description: SW-17	Matrix: Aqueous
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1241	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	1.0		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Bromofluorobenzene		106	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-008
Description: SW-17	Matrix: Aqueous
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 2017	SCD	07/19/2019 1820	23207

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-008
Description: SW-17	Matrix: Aqueous
Date Sampled: 07/18/2019 1300	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 2017	SCD	07/19/2019 1820	23207

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		66	37-129
2-Fluorophenol		48	24-127
Nitrobenzene-d5		66	38-127
Phenol-d5		59	28-128
Terphenyl-d14		71	10-148
2,4,6-Tribromophenol		66	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-009
Description: DUP-01-071819 (SED)	Matrix: Solid
Date Sampled: 07/18/2019	% Solids: 90.4 07/19/2019 0132
Date Received: 07/18/2019	Project Name: Groundwater
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	07/25/2019 0248	GMH		23696

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.95		0.20	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-009
Description: DUP-01-071819 (SED)	Matrix: Solid
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 90.4 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/25/2019 1539	ECB		23776	5.24

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		19	ug/kg	1
Benzene	71-43-2	8260B	ND		4.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.5	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.5	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.8	ug/kg	1
Styrene	100-42-5	8260B	ND		4.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.8	ug/kg	1
Toluene	108-88-3	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.8	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-009
Description: DUP-01-071819 (SED)	Matrix: Solid
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 90.4 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	07/25/2019 1539	ECB		23776	5.24

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		96	53-142
Bromofluorobenzene		106	47-138
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-009
Description: DUP-01-071819 (SED)	Matrix: Solid
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 90.4 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1942	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-009
Description: DUP-01-071819 (SED)	Matrix: Solid
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	% Solids: 90.4 07/19/2019 0132
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	07/25/2019 1942	SCD	07/23/2019 1708	23488

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		65	24-137
2-Fluorophenol		68	16-136
Nitrobenzene-d5		64	12-144
Phenol-d5		68	26-148
Terphenyl-d14		76	20-127
2,4,6-Tribromophenol		68	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UG18083-010
Description: DUP-01-071819 (SW)	Matrix: Aqueous
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	2	07/19/2019 2221	MDD		23225

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	3.8		0.040	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-010
Description: DUP-01-071819 (SW)	Matrix: Aqueous
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1307	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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	16		1.0	ug/L	1
Toluene	108-88-3	8260B	ND		1.0	ug/L	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-010
Description: DUP-01-071819 (SW)	Matrix: Aqueous
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1307	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	1.0		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		104	70-130
Toluene-d8		105	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-010
Description: DUP-01-071819 (SW)	Matrix: Aqueous
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019	1952 SCD	07/19/2019	1820 23207

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-010
Description: DUP-01-071819 (SW)	Matrix: Aqueous
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	07/24/2019 1952	SCD	07/19/2019 1820	23207

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		68	37-129
2-Fluorophenol		49	24-127
Nitrobenzene-d5		68	38-127
Phenol-d5		65	28-128
Terphenyl-d14		74	10-148
2,4,6-Tribromophenol		68	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-011
Description: TB-02-071819	Matrix: Aqueous
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1332	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UG18083-011
Description: TB-02-071819	Matrix: Aqueous
Date Sampled: 07/18/2019	Project Name: Groundwater
Date Received: 07/18/2019	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	07/22/2019 1332	JTH		23315

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		105	70-130
Toluene-d8		106	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com



Chain of Custody  
and  
Miscellaneous Documents

95368  
Number

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106 Vantage Point Drive • West Columbia, SC 29172  
Telephone No. 803-791-9700 Fax No. 803-791-9111  
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**Chain of Custody Record**



Client <b>WESTINGHOUSE</b>		Telephone No. / E-mail <b>803 647 1420</b>		Quote No. <b>22261</b>	
Address <b>5801 BUFF RD</b>		Analyst (Attest if more than is needed) <b>JAMES LANGRISH</b>		Page <b>1 of 1</b>	
City <b>HOLKINS</b>		State <b>SC</b>		Zip Code <b>29061</b>	
Project Name <b>WESTINGHOUSE RE</b>		Project No. <b>60595649.9</b>		GRW <b>UG18083</b>	
Report to Contact <b>DANA JEFFER</b>		Sample ID / Description <b>ED-01-071819</b>		Remarks / Cooler I.D. <b>TR-02-071819 VOC'S</b>	
Sampler's Signature <i>[Signature]</i>		Matrix <b>Soil</b>		Mn of Containers by Preservative Type	
Principal Name <b>JAMES LANGRISH</b>		Date <b>7-18-19</b>		Time <b>0750</b>	
Sample ID / Description <b>ED-02-071819</b>		Date <b>7-18-19</b>		Time <b>0800</b>	
Sample ID / Description <b>SED-25</b>		Date <b>7-18-19</b>		Time <b>0915</b>	
Sample ID / Description <b>SED-26</b>		Date <b>7-18-19</b>		Time <b>0940</b>	
Sample ID / Description <b>SED-27</b>		Date <b>7-18-19</b>		Time <b>1030</b>	
Sample ID / Description <b>SED-28</b>		Date <b>7-18-19</b>		Time <b>1050</b>	
Sample ID / Description <b>SED-17</b>		Date <b>7-18-19</b>		Time <b>1300</b>	
Sample ID / Description <b>SED-17</b>		Date <b>7-18-19</b>		Time <b>1300</b>	
Sample ID / Description <b>DUP-01-071819 (SED)</b>		Date <b>7-18-19</b>		Time <b>1515</b>	
Sample ID / Description <b>DUP-01-071819 (SL)</b>		Date <b>7-18-19</b>		Time <b>1515</b>	

Sample ID / Description	Date	Time	Turn Around Time Required (Prior lab approval required for expedited DAT.)	Possible Hazard / Identification		GC Requirements (Specify)					
				Return to Client	Disposal by Lab	Non-Hazard	Flammable	Skin Irritant	Poison	Unknown	
1. Relinquished by <i>[Signature]</i>				<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Relinquished by <i>[Signature]</i>				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Relinquished by				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Relinquished by				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Note: All samples are retained for four weeks from receipt unless other arrangements are made.**

LAD USE ONLY  
Received on ice (Circle)  No  Ice Pack  Receipt Terry: **40**

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: ME0018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: Westinghouse

Cooler Inspected by/date: DMN / 7/18/19

Lot #: UG18083

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 19-1020	
4.0 / 4.0 °C NA / NA °C NA / NA °C NA / NA °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (3/4" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # 22261
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) Trip Blanks were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA	
SR barcode labels applied by: DMN Date: 7/18/19	
Comments: Cooler screened for Radiation in SR on 7/18/19	

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

### Westinghouse Electric Company

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: RI Implementation

Project Number: 60595649

Lot Number: **UK21098**

Date Completed: 12/04/2019



12/04/2019 1:57 PM

Approved and released by:  
Project Manager: Grant Wilton



The electronic signature above is the equivalent of a handwritten signature.  
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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: UK21098

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Samples -001, -002, -005, -006, -009: The samples were analyzed at a dilution due to the high concentration of non-target analytes present. The reporting limits were raised accordingly.

### Volatile Organic Analysis – Method 8260B

Acetone was reported as an estimated value in samples: -002, -003, -004, -006, -007 as the result was above the upper calibration level. The samples were re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the LOQ therefore only the low level was reported.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: UK21098  
Project Name: RI Implementation  
Project Number: 60595649

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-30 0"-6"	Solid	11/21/2019 0955	11/21/2019
002	SED-30 6"-12"	Solid	11/21/2019 1000	11/21/2019
003	SED-31 0"-6"	Solid	11/21/2019 1200	11/21/2019
004	SED-31 6"-12"	Solid	11/21/2019 1205	11/21/2019
005	SED-32 0"-6"	Solid	11/21/2019 1400	11/21/2019
006	SED-32 6"-12"	Solid	11/21/2019 1405	11/21/2019
007	SED-33 0"-6"	Solid	11/21/2019 1500	11/21/2019
008	SED-33 6"-12"	Solid	11/21/2019 1505	11/21/2019
009	SED-34 0"-6"	Solid	11/21/2019 1610	11/21/2019
010	SED-34 6"-12"	Solid	11/21/2019 1615	11/21/2019
011	TB-112119	Aqueous	11/21/2019	11/21/2019

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(11 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary  
Westinghouse Electric Company  
Lot Number: UK21098  
Project Name: RI Implementation  
Project Number: 60595649

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-30 0"-6"	Solid	Acetone	8260B	380		ug/kg	7
001	SED-30 0"-6"	Solid	2-Butanone (MEK)	8260B	26		ug/kg	7
002	SED-30 6"-12"	Solid	Acetone	8260B	530	E	ug/kg	12
002	SED-30 6"-12"	Solid	2-Butanone (MEK)	8260B	25		ug/kg	12
003	SED-31 0"-6"	Solid	Acetone	8260B	410	E	ug/kg	17
004	SED-31 6"-12"	Solid	Acetone	8260B	440	E	ug/kg	22
005	SED-32 0"-6"	Solid	Nitrate - N (soluble)	9056A	1.1		mg/kg	26
005	SED-32 0"-6"	Solid	Acetone	8260B	450		ug/kg	27
005	SED-32 0"-6"	Solid	2-Butanone (MEK)	8260B	38		ug/kg	27
006	SED-32 6"-12"	Solid	Acetone	8260B	440	E	ug/kg	32
006	SED-32 6"-12"	Solid	2-Butanone (MEK)	8260B	76		ug/kg	32
007	SED-33 0"-6"	Solid	Acetone	8260B	490	E	ug/kg	37
008	SED-33 6"-12"	Solid	Acetone	8260B	400		ug/kg	42
008	SED-33 6"-12"	Solid	2-Butanone (MEK)	8260B	45		ug/kg	42
009	SED-34 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.62		mg/kg	46
009	SED-34 0"-6"	Solid	Acetone	8260B	200		ug/kg	47
009	SED-34 0"-6"	Solid	2-Butanone (MEK)	8260B	28		ug/kg	47
010	SED-34 6"-12"	Solid	Acetone	8260B	180		ug/kg	52
010	SED-34 6"-12"	Solid	2-Butanone (MEK)	8260B	28		ug/kg	52

(19 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-001
Description: SED-30 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 0955	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 50.0 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2012	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-001
Description: SED-30 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 0955	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 50.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 0337	ALR1		37042	4.73

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	380		21	ug/kg	1
Benzene	71-43-2	8260B	ND		5.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	26		21	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.3	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.3	ug/kg	1
Styrene	100-42-5	8260B	ND		5.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.3	ug/kg	1
Toluene	108-88-3	8260B	ND		5.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.3	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-001
Description: SED-30 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 0955	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 50.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 0337	ALR1		37042	4.73

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		92	53-142
Bromofluorobenzene		87	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-001
Description: SED-30 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 0955	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 50.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 1914	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		63	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		63	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		63	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		63	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		63	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		63	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		63	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		63	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		63	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		63	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		620	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		620	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		63	ug/kg	1
Fluorene	86-73-7	8270D	ND		63	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-001
Description: SED-30 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 0955	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 50.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 1914	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		63	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		63	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		620	ug/kg	1
Naphthalene	91-20-3	8270D	ND		63	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		620	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		620	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		620	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		620	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		63	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		63	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		53	24-137
2-Fluorophenol		48	16-136
Nitrobenzene-d5		48	12-144
Phenol-d5		52	26-148
Terphenyl-d14		57	20-127
2,4,6-Tribromophenol		88	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-002
Description: SED-30 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1000	% Solids: 44.7 11/22/2019 0109
Date Received: 11/21/2019	Project Name: RI Implementation
	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2033	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-002
Description: SED-30 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1000	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 44.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/27/2019 0340	ALR1		37193	4.11

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	530	E	24	ug/kg	2
Benzene	71-43-2	8260B	ND		6.1	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.1	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.1	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.1	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	25		24	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.1	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.1	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.1	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.1	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.1	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.1	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.1	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.1	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.1	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.1	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.1	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.1	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.1	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.1	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.1	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.1	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.1	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.1	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.1	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.1	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.1	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.1	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.1	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.1	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.1	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.1	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.1	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.1	ug/kg	2
Styrene	100-42-5	8260B	ND		6.1	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.1	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.1	ug/kg	2
Toluene	108-88-3	8260B	ND		6.1	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.1	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.1	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.1	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.1	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-002
Description: SED-30 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1000	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
	% Solids: 44.7 11/22/2019 0109

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	11/27/2019 0340	ALR1		37193	4.11

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.1	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.1	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.1	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		111	53-142
Bromofluorobenzene		88	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-002
Description: SED-30 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1000	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 44.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2031	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		64	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		64	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		64	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		64	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		64	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		64	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		64	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		64	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		64	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		64	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		620	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		620	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		64	ug/kg	1
Fluorene	86-73-7	8270D	ND		64	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-002
Description: SED-30 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1000	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 44.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2031	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		64	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		64	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		620	ug/kg	1
Naphthalene	91-20-3	8270D	ND		64	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		620	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		620	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		620	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		620	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		64	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		64	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		39	24-137
2-Fluorophenol		38	16-136
Nitrobenzene-d5		37	12-144
Phenol-d5		39	26-148
Terphenyl-d14		45	20-127
2,4,6-Tribromophenol		86	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-003
Description: SED-31 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1200	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 66.7 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2054	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-003
Description: SED-31 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1200	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 66.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1309	JM1		37128	6.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	410	E	16	ug/kg	1
Benzene	71-43-2	8260B	ND		4.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		16	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.0	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.0	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.0	ug/kg	1
Styrene	100-42-5	8260B	ND		4.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.0	ug/kg	1
Toluene	108-88-3	8260B	ND		4.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.0	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-003
Description: SED-31 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1200	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 66.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1309	JM1		37128	6.25

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	53-142
Bromofluorobenzene		97	47-138
Toluene-d8		107	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-003
Description: SED-31 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1200	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 66.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 1822	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-003
Description: SED-31 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1200	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 66.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 1822	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		56	24-137
2-Fluorophenol		56	16-136
Nitrobenzene-d5		52	12-144
Phenol-d5		58	26-148
Terphenyl-d14		63	20-127
2,4,6-Tribromophenol		52	27-128

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-004
Description: SED-31 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1205	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 74.4 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2115	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-004
Description: SED-31 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1205	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 74.4 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1332	JM1		37128	5.99

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	440	E	17	ug/kg	1
Benzene	71-43-2	8260B	ND		4.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		17	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.3	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.3	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.2	ug/kg	1
Styrene	100-42-5	8260B	ND		4.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.2	ug/kg	1
Toluene	108-88-3	8260B	ND		4.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.2	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-004
Description: SED-31 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1205	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
	% Solids: 74.4 11/22/2019 0109

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1332	JM1		37128	5.99

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	53-142
Bromofluorobenzene		96	47-138
Toluene-d8		103	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-004
Description: SED-31 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1205	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 74.4 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 1848	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		63	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		63	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		63	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		63	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		63	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		63	ug/kg	1
Caprolactam	105-60-2	8270D	ND		63	ug/kg	1
Carbazole	86-74-8	8270D	ND		63	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		63	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		63	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		63	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		63	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		63	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		63	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		63	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		63	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		63	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		63	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		63	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		63	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		63	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		63	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		63	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		310	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		310	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		63	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		63	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		63	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		63	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		310	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-004
Description: SED-31 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1205	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 74.4 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 1848	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		63	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		63	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		63	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		63	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		310	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		63	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		63	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		310	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		63	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		63	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		63	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	24-137
2-Fluorophenol		63	16-136
Nitrobenzene-d5		57	12-144
Phenol-d5		68	26-148
Terphenyl-d14		74	20-127
2,4,6-Tribromophenol		57	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-005
Description: SED-32 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1400	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
	% Solids: 49.0 11/22/2019 0109

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2136	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	1.1		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-005
Description: SED-32 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1400	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 49.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1354	JM1		37128	4.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	450		23	ug/kg	1
Benzene	71-43-2	8260B	ND		5.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	38		23	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.9	ug/kg	1
Styrene	100-42-5	8260B	ND		5.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.9	ug/kg	1
Toluene	108-88-3	8260B	ND		5.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.9	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-005
Description: SED-32 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1400	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
	% Solids: 49.0 11/22/2019 0109

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1354	JM1		37128	4.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	53-142
Bromofluorobenzene		80	47-138
Toluene-d8		118	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK21098-005

Description: SED-32 0"-6"

Matrix: Solid

Date Sampled: 11/21/2019 1400

Project Name: RI Implementation

% Solids: 49.0 11/22/2019 0109

Date Received: 11/21/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2056	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-005
Description: SED-32 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1400	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 49.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2056	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		59	24-137
2-Fluorophenol		55	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		58	26-148
Terphenyl-d14		63	20-127
2,4,6-Tribromophenol		95	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-006
Description: SED-32 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1405	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 57.0 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2157	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-006
Description: SED-32 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1405	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 57.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1417	JM1		37128	4.67

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	440	E	21	ug/kg	1
Benzene	71-43-2	8260B	ND		5.4	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.4	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.4	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	76		21	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.4	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.4	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.4	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.4	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.4	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.4	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.4	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.4	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.4	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.4	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.4	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.4	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.4	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.4	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.4	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.4	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.4	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.4	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.4	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.4	ug/kg	1
Styrene	100-42-5	8260B	ND		5.4	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.4	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.4	ug/kg	1
Toluene	108-88-3	8260B	ND		5.4	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.4	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.4	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.4	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.4	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-006
Description: SED-32 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1405	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
	% Solids: 57.0 11/22/2019 0109

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1417	JM1		37128	4.67

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.4	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.4	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	53-142
Bromofluorobenzene		84	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-006
Description: SED-32 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1405	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 57.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2122	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		63	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		63	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		63	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		63	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		63	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		63	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		63	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		63	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		63	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		63	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		620	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		620	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		63	ug/kg	1
Fluorene	86-73-7	8270D	ND		63	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-006
Description: SED-32 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1405	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 57.0 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2122	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		63	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		63	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		620	ug/kg	1
Naphthalene	91-20-3	8270D	ND		63	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		620	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		620	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		620	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		620	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		63	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		63	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		54	24-137
2-Fluorophenol		60	16-136
Nitrobenzene-d5		54	12-144
Phenol-d5		71	26-148
Terphenyl-d14		59	20-127
2,4,6-Tribromophenol		93	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-007
Description: SED-33 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1500	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 56.6 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2219	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-007
Description: SED-33 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1500	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 56.6 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1439	JM1		37128	4.99

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	490	E	20	ug/kg	1
Benzene	71-43-2	8260B	ND		5.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/kg	1
Styrene	100-42-5	8260B	ND		5.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-007
Description: SED-33 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1500	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 56.6 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1439	JM1		37128	4.99

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		104	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-007
Description: SED-33 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1500	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 56.6 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2147	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-007
Description: SED-33 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1500	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 56.6 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2147	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		57	24-137
2-Fluorophenol		59	16-136
Nitrobenzene-d5		56	12-144
Phenol-d5		62	26-148
Terphenyl-d14		64	20-127
2,4,6-Tribromophenol		51	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-008
Description: SED-33 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1505	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 65.6 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2240	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-008
Description: SED-33 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1505	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 65.6 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1502	JM1		37128	4.44

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	400		23	ug/kg	1
Benzene	71-43-2	8260B	ND		5.6	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.6	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.6	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.6	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	45		23	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.6	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.6	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.6	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.6	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.6	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.6	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.6	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.6	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.6	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.6	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.6	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.6	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.6	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.6	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.6	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.6	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.6	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.6	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.6	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.6	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.6	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.6	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.6	ug/kg	1
Styrene	100-42-5	8260B	ND		5.6	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.6	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.6	ug/kg	1
Toluene	108-88-3	8260B	ND		5.6	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.6	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.6	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.6	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.6	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-008
Description: SED-33 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1505	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
	% Solids: 65.6 11/22/2019 0109

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1502	JM1		37128	4.44

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.6	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.6	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	53-142
Bromofluorobenzene		86	47-138
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-008
Description: SED-33 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1505	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 65.6 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2005	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-008
Description: SED-33 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1505	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 65.6 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2005	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		54	24-137
2-Fluorophenol		56	16-136
Nitrobenzene-d5		52	12-144
Phenol-d5		60	26-148
Terphenyl-d14		62	20-127
2,4,6-Tribromophenol		48	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-009
Description: SED-34 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1610	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 53.7 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/02/2019 2301	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.62		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-009
Description: SED-34 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1610	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 53.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1525	JM1		37128	4.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	200		23	ug/kg	1
Benzene	71-43-2	8260B	ND		5.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	28		23	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.9	ug/kg	1
Styrene	100-42-5	8260B	ND		5.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.9	ug/kg	1
Toluene	108-88-3	8260B	ND		5.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.9	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-009
Description: SED-34 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1610	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 53.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1525	JM1		37128	4.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		91	53-142
Bromofluorobenzene		84	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-009
Description: SED-34 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1610	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 53.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2212	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		630	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		630	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-009
Description: SED-34 0"-6"	Matrix: Solid
Date Sampled: 11/21/2019 1610	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 53.7 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 2212	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		630	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		630	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		630	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		630	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		630	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		55	24-137
2-Fluorophenol		59	16-136
Nitrobenzene-d5		53	12-144
Phenol-d5		67	26-148
Terphenyl-d14		61	20-127
2,4,6-Tribromophenol		91	27-128

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK21098-010
Description: SED-34 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1615	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649
% Solids: 60.5 11/22/2019 0109	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 0004	SUH		37724

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-010
Description: SED-34 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1615	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 60.5 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1547	JM1		37128	4.84

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	180		21	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	28		21	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.2	ug/kg	1
Styrene	100-42-5	8260B	ND		5.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-010
Description: SED-34 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1615	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 60.5 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 1547	JM1		37128	4.84

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		84	47-138
Toluene-d8		110	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-010
Description: SED-34 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1615	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 60.5 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2237	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		310	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		310	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		310	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-010
Description: SED-34 6"-12"	Matrix: Solid
Date Sampled: 11/21/2019 1615	Project Name: RI Implementation
Date Received: 11/21/2019	% Solids: 60.5 11/22/2019 0109
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2237	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		310	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		310	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		46	24-137
2-Fluorophenol		48	16-136
Nitrobenzene-d5		44	12-144
Phenol-d5		50	26-148
Terphenyl-d14		51	20-127
2,4,6-Tribromophenol		43	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-011
Description: TB-112119	Matrix: Aqueous
Date Sampled: 11/21/2019	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/26/2019 0200	JTH		37056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK21098-011
Description: TB-112119	Matrix: Aqueous
Date Sampled: 11/21/2019	Project Name: RI Implementation
Date Received: 11/21/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/26/2019 0200	JTH		37056

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Toluene-d8		107	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## QC Summary

# Inorganic non-metals - MB

Sample ID: UQ37724-001

Matrix: Solid

Batch: 37724

Analytical Method: 9056A

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N (soluble)	ND		1	0.50	mg/kg	12/02/2019 1557

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: UK21098

# Inorganic non-metals - LCS

Sample ID: UQ37724-002

Matrix: Solid

Batch: 37724

Analytical Method: 9056A

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	0.80	0.77		1	96	80-120	12/02/2019 1621

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37042-001

Matrix: Solid

Batch: 37042

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	11/25/2019 2140
Benzene	ND		1	5.0	ug/kg	11/25/2019 2140
Bromodichloromethane	ND		1	5.0	ug/kg	11/25/2019 2140
Bromoform	ND		1	5.0	ug/kg	11/25/2019 2140
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	11/25/2019 2140
2-Butanone (MEK)	ND		1	20	ug/kg	11/25/2019 2140
Carbon disulfide	ND		1	5.0	ug/kg	11/25/2019 2140
Carbon tetrachloride	ND		1	5.0	ug/kg	11/25/2019 2140
Chlorobenzene	ND		1	5.0	ug/kg	11/25/2019 2140
Chloroethane	ND		1	5.0	ug/kg	11/25/2019 2140
Chloroform	ND		1	5.0	ug/kg	11/25/2019 2140
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	11/25/2019 2140
Cyclohexane	ND		1	5.0	ug/kg	11/25/2019 2140
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	11/25/2019 2140
Dibromochloromethane	ND		1	5.0	ug/kg	11/25/2019 2140
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	11/25/2019 2140
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	11/25/2019 2140
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	11/25/2019 2140
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	11/25/2019 2140
Dichlorodifluoromethane	ND		1	5.0	ug/kg	11/25/2019 2140
1,1-Dichloroethane	ND		1	5.0	ug/kg	11/25/2019 2140
1,2-Dichloroethane	ND		1	5.0	ug/kg	11/25/2019 2140
1,1-Dichloroethene	ND		1	5.0	ug/kg	11/25/2019 2140
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/25/2019 2140
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/25/2019 2140
1,2-Dichloropropane	ND		1	5.0	ug/kg	11/25/2019 2140
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/25/2019 2140
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/25/2019 2140
Ethylbenzene	ND		1	5.0	ug/kg	11/25/2019 2140
2-Hexanone	ND		1	10	ug/kg	11/25/2019 2140
Isopropylbenzene	ND		1	5.0	ug/kg	11/25/2019 2140
Methyl acetate	ND		1	5.0	ug/kg	11/25/2019 2140
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	11/25/2019 2140
4-Methyl-2-pentanone	ND		1	10	ug/kg	11/25/2019 2140
Methylcyclohexane	ND		1	5.0	ug/kg	11/25/2019 2140
Methylene chloride	ND		1	5.0	ug/kg	11/25/2019 2140
Styrene	ND		1	5.0	ug/kg	11/25/2019 2140
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	11/25/2019 2140
Tetrachloroethene	ND		1	5.0	ug/kg	11/25/2019 2140
Toluene	ND		1	5.0	ug/kg	11/25/2019 2140
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	11/25/2019 2140
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	11/25/2019 2140
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	11/25/2019 2140
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	11/25/2019 2140

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37042-001

Matrix: Solid

Batch: 37042

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	11/25/2019 2140
Trichlorofluoromethane	ND		1	5.0	ug/kg	11/25/2019 2140
Vinyl chloride	ND		1	5.0	ug/kg	11/25/2019 2140
Xylenes (total)	ND		1	10	ug/kg	11/25/2019 2140
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		95	53-142			
Bromofluorobenzene		98	47-138			
Toluene-d8		100	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37042-002

Matrix: Solid

Batch: 37042

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	11/25/2019 2008
Benzene	50	52		1	104	70-130	11/25/2019 2008
Bromodichloromethane	50	53		1	106	70-130	11/25/2019 2008
Bromoform	50	52		1	104	70-130	11/25/2019 2008
Bromomethane (Methyl bromide)	50	54		1	108	70-130	11/25/2019 2008
2-Butanone (MEK)	100	91		1	91	60-140	11/25/2019 2008
Carbon disulfide	50	52		1	105	70-130	11/25/2019 2008
Carbon tetrachloride	50	55		1	109	70-130	11/25/2019 2008
Chlorobenzene	50	52		1	104	70-130	11/25/2019 2008
Chloroethane	50	57		1	115	70-130	11/25/2019 2008
Chloroform	50	53		1	106	70-130	11/25/2019 2008
Chloromethane (Methyl chloride)	50	51		1	103	60-140	11/25/2019 2008
Cyclohexane	50	58		1	117	70-130	11/25/2019 2008
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	95	70-130	11/25/2019 2008
Dibromochloromethane	50	52		1	103	70-130	11/25/2019 2008
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	11/25/2019 2008
1,2-Dichlorobenzene	50	52		1	104	70-130	11/25/2019 2008
1,3-Dichlorobenzene	50	52		1	105	70-130	11/25/2019 2008
1,4-Dichlorobenzene	50	52		1	105	70-130	11/25/2019 2008
Dichlorodifluoromethane	50	56		1	112	60-140	11/25/2019 2008
1,1-Dichloroethane	50	53		1	106	70-130	11/25/2019 2008
1,2-Dichloroethane	50	51		1	101	70-130	11/25/2019 2008
1,1-Dichloroethene	50	63		1	126	70-130	11/25/2019 2008
cis-1,2-Dichloroethene	50	53		1	106	70-130	11/25/2019 2008
trans-1,2-Dichloroethene	50	58		1	116	70-130	11/25/2019 2008
1,2-Dichloropropane	50	52		1	104	70-130	11/25/2019 2008
cis-1,3-Dichloropropene	50	56		1	111	70-130	11/25/2019 2008
trans-1,3-Dichloropropene	50	54		1	108	70-130	11/25/2019 2008
Ethylbenzene	50	53		1	105	70-130	11/25/2019 2008
2-Hexanone	100	95		1	95	70-130	11/25/2019 2008
Isopropylbenzene	50	52		1	104	70-130	11/25/2019 2008
Methyl acetate	50	48		1	96	70-130	11/25/2019 2008
Methyl tertiary butyl ether (MTBE)	50	52		1	104	70-130	11/25/2019 2008
4-Methyl-2-pentanone	100	96		1	96	70-130	11/25/2019 2008
Methylcyclohexane	50	61		1	121	70-130	11/25/2019 2008
Methylene chloride	50	51		1	101	70-130	11/25/2019 2008
Styrene	50	53		1	105	70-130	11/25/2019 2008
1,1,2,2-Tetrachloroethane	50	49		1	98	70-130	11/25/2019 2008
Tetrachloroethene	50	53		1	107	70-130	11/25/2019 2008
Toluene	50	50		1	99	70-130	11/25/2019 2008
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	57		1	114	70-130	11/25/2019 2008
1,2,4-Trichlorobenzene	50	53		1	106	70-130	11/25/2019 2008
1,1,1-Trichloroethane	50	54		1	108	70-130	11/25/2019 2008
1,1,2-Trichloroethane	50	49		1	99	70-130	11/25/2019 2008

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37042-002

Matrix: Solid

Batch: 37042

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	11/25/2019 2008
Trichlorofluoromethane	50	57		1	114	70-130	11/25/2019 2008
Vinyl chloride	50	50		1	100	70-130	11/25/2019 2008
Xylenes (total)	100	110		1	106	70-130	11/25/2019 2008
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		93	53-142				
Bromofluorobenzene		98	47-138				
Toluene-d8		101	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37042-003

Matrix: Solid

Batch: 37042

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	91		1	91	14	60-140	20	11/25/2019 2031
Benzene	50	49		1	97	7.0	70-130	20	11/25/2019 2031
Bromodichloromethane	50	50		1	100	6.1	70-130	20	11/25/2019 2031
Bromoform	50	50		1	100	4.5	70-130	20	11/25/2019 2031
Bromomethane (Methyl bromide)	50	49		1	99	9.0	70-130	20	11/25/2019 2031
2-Butanone (MEK)	100	85		1	85	7.0	60-140	20	11/25/2019 2031
Carbon disulfide	50	47		1	94	10	70-130	20	11/25/2019 2031
Carbon tetrachloride	50	50		1	100	8.7	70-130	20	11/25/2019 2031
Chlorobenzene	50	49		1	97	6.2	70-130	20	11/25/2019 2031
Chloroethane	50	52		1	105	9.0	70-130	20	11/25/2019 2031
Chloroform	50	49		1	99	7.5	70-130	20	11/25/2019 2031
Chloromethane (Methyl chloride)	50	46		1	93	10	60-140	20	11/25/2019 2031
Cyclohexane	50	53		1	106	10	70-130	20	11/25/2019 2031
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	1.9	70-130	20	11/25/2019 2031
Dibromochloromethane	50	50		1	101	2.7	70-130	20	11/25/2019 2031
1,2-Dibromoethane (EDB)	50	49		1	98	1.9	70-130	20	11/25/2019 2031
1,2-Dichlorobenzene	50	49		1	99	4.8	70-130	20	11/25/2019 2031
1,3-Dichlorobenzene	50	50		1	99	5.4	70-130	20	11/25/2019 2031
1,4-Dichlorobenzene	50	49		1	99	6.2	70-130	20	11/25/2019 2031
Dichlorodifluoromethane	50	50		1	99	12	60-140	20	11/25/2019 2031
1,1-Dichloroethane	50	49		1	98	7.7	70-130	20	11/25/2019 2031
1,2-Dichloroethane	50	48		1	96	6.0	70-130	20	11/25/2019 2031
1,1-Dichloroethene	50	57		1	113	11	70-130	20	11/25/2019 2031
cis-1,2-Dichloroethene	50	49		1	98	7.8	70-130	20	11/25/2019 2031
trans-1,2-Dichloroethene	50	52		1	104	10	70-130	20	11/25/2019 2031
1,2-Dichloropropane	50	49		1	99	4.7	70-130	20	11/25/2019 2031
cis-1,3-Dichloropropene	50	53		1	105	5.4	70-130	20	11/25/2019 2031
trans-1,3-Dichloropropene	50	53		1	105	3.1	70-130	20	11/25/2019 2031
Ethylbenzene	50	50		1	99	5.7	70-130	20	11/25/2019 2031
2-Hexanone	100	87		1	87	8.9	70-130	20	11/25/2019 2031
Isopropylbenzene	50	48		1	97	6.9	70-130	20	11/25/2019 2031
Methyl acetate	50	47		1	93	3.4	70-130	20	11/25/2019 2031
Methyl tertiary butyl ether (MTBE)	50	47		1	95	9.0	70-130	20	11/25/2019 2031
4-Methyl-2-pentanone	100	91		1	91	5.3	70-130	20	11/25/2019 2031
Methylcyclohexane	50	55		1	110	9.4	70-130	20	11/25/2019 2031
Methylene chloride	50	46		1	93	9.1	70-130	20	11/25/2019 2031
Styrene	50	49		1	99	6.0	70-130	20	11/25/2019 2031
1,1,2,2-Tetrachloroethane	50	48		1	96	2.2	70-130	20	11/25/2019 2031
Tetrachloroethene	50	50		1	100	6.5	70-130	20	11/25/2019 2031
Toluene	50	47		1	95	4.4	70-130	20	11/25/2019 2031
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	105	7.8	70-130	20	11/25/2019 2031
1,2,4-Trichlorobenzene	50	49		1	97	9.2	70-130	20	11/25/2019 2031
1,1,1-Trichloroethane	50	49		1	97	10	70-130	20	11/25/2019 2031
1,1,2-Trichloroethane	50	49		1	97	1.9	70-130	20	11/25/2019 2031

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37042-003

Matrix: Solid

Batch: 37042

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	49		1	98	6.9	70-130	20	11/25/2019 2031
Trichlorofluoromethane	50	51		1	102	12	70-130	20	11/25/2019 2031
Vinyl chloride	50	46		1	91	9.5	70-130	20	11/25/2019 2031
Xylenes (total)	100	99		1	99	6.6	70-130	20	11/25/2019 2031
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		92	53-142						
Bromofluorobenzene		97	47-138						
Toluene-d8		101	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Data for Lot Number: UK21098

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37056-001

Matrix: Aqueous

Batch: 37056

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	11/25/2019 2232
Benzene	ND		1	1.0	ug/L	11/25/2019 2232
Bromodichloromethane	ND		1	1.0	ug/L	11/25/2019 2232
Bromoform	ND		1	1.0	ug/L	11/25/2019 2232
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	11/25/2019 2232
2-Butanone (MEK)	ND		1	10	ug/L	11/25/2019 2232
Carbon disulfide	ND		1	1.0	ug/L	11/25/2019 2232
Carbon tetrachloride	ND		1	1.0	ug/L	11/25/2019 2232
Chlorobenzene	ND		1	1.0	ug/L	11/25/2019 2232
Chloroethane	ND		1	2.0	ug/L	11/25/2019 2232
Chloroform	ND		1	1.0	ug/L	11/25/2019 2232
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	11/25/2019 2232
Cyclohexane	ND		1	1.0	ug/L	11/25/2019 2232
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	11/25/2019 2232
Dibromochloromethane	ND		1	1.0	ug/L	11/25/2019 2232
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	11/25/2019 2232
1,2-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 2232
1,3-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 2232
1,4-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 2232
Dichlorodifluoromethane	ND		1	2.0	ug/L	11/25/2019 2232
1,1-Dichloroethane	ND		1	1.0	ug/L	11/25/2019 2232
1,2-Dichloroethane	ND		1	1.0	ug/L	11/25/2019 2232
1,1-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 2232
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 2232
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 2232
1,2-Dichloropropane	ND		1	1.0	ug/L	11/25/2019 2232
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	11/25/2019 2232
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	11/25/2019 2232
Ethylbenzene	ND		1	1.0	ug/L	11/25/2019 2232
2-Hexanone	ND		1	10	ug/L	11/25/2019 2232
Isopropylbenzene	ND		1	1.0	ug/L	11/25/2019 2232
Methyl acetate	ND		1	1.0	ug/L	11/25/2019 2232
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	11/25/2019 2232
4-Methyl-2-pentanone	ND		1	10	ug/L	11/25/2019 2232
Methylcyclohexane	ND		1	5.0	ug/L	11/25/2019 2232
Methylene chloride	ND		1	1.0	ug/L	11/25/2019 2232
Styrene	ND		1	1.0	ug/L	11/25/2019 2232
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	11/25/2019 2232
Tetrachloroethene	ND		1	1.0	ug/L	11/25/2019 2232
Toluene	ND		1	1.0	ug/L	11/25/2019 2232
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	11/25/2019 2232
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	11/25/2019 2232
1,1,1-Trichloroethane	ND		1	1.0	ug/L	11/25/2019 2232
1,1,2-Trichloroethane	ND		1	1.0	ug/L	11/25/2019 2232

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37056-001

Matrix: Aqueous

Batch: 37056

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	11/25/2019 2232
Trichlorofluoromethane	ND		1	1.0	ug/L	11/25/2019 2232
Vinyl chloride	ND		1	1.0	ug/L	11/25/2019 2232
Xylenes (total)	ND		1	1.0	ug/L	11/25/2019 2232
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		104	70-130			
Bromofluorobenzene		104	70-130			
Toluene-d8		110	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37056-002

Matrix: Aqueous

Batch: 37056

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	123	60-140	11/25/2019 2109
Benzene	50	53		1	105	70-130	11/25/2019 2109
Bromodichloromethane	50	54		1	107	70-130	11/25/2019 2109
Bromoform	50	55		1	109	70-130	11/25/2019 2109
Bromomethane (Methyl bromide)	50	47		1	94	70-130	11/25/2019 2109
2-Butanone (MEK)	100	110		1	111	70-130	11/25/2019 2109
Carbon disulfide	50	52		1	104	70-130	11/25/2019 2109
Carbon tetrachloride	50	53		1	106	70-130	11/25/2019 2109
Chlorobenzene	50	52		1	105	70-130	11/25/2019 2109
Chloroethane	50	57		1	115	70-130	11/25/2019 2109
Chloroform	50	53		1	107	70-130	11/25/2019 2109
Chloromethane (Methyl chloride)	50	50		1	99	60-140	11/25/2019 2109
Cyclohexane	50	53		1	106	70-130	11/25/2019 2109
1,2-Dibromo-3-chloropropane (DBCP)	50	53		1	106	70-130	11/25/2019 2109
Dibromochloromethane	50	54		1	108	70-130	11/25/2019 2109
1,2-Dibromoethane (EDB)	50	52		1	104	70-130	11/25/2019 2109
1,2-Dichlorobenzene	50	52		1	104	70-130	11/25/2019 2109
1,3-Dichlorobenzene	50	53		1	106	70-130	11/25/2019 2109
1,4-Dichlorobenzene	50	52		1	103	70-130	11/25/2019 2109
Dichlorodifluoromethane	50	55		1	110	60-140	11/25/2019 2109
1,1-Dichloroethane	50	55		1	109	70-130	11/25/2019 2109
1,2-Dichloroethane	50	51		1	101	70-130	11/25/2019 2109
1,1-Dichloroethene	50	61		1	122	70-130	11/25/2019 2109
cis-1,2-Dichloroethene	50	54		1	108	70-130	11/25/2019 2109
trans-1,2-Dichloroethene	50	57		1	115	70-130	11/25/2019 2109
1,2-Dichloropropane	50	55		1	110	70-130	11/25/2019 2109
cis-1,3-Dichloropropene	50	58		1	115	70-130	11/25/2019 2109
trans-1,3-Dichloropropene	50	58		1	117	70-130	11/25/2019 2109
Ethylbenzene	50	54		1	108	70-130	11/25/2019 2109
2-Hexanone	100	110		1	110	70-130	11/25/2019 2109
Isopropylbenzene	50	53		1	107	70-130	11/25/2019 2109
Methyl acetate	50	57		1	114	70-130	11/25/2019 2109
Methyl tertiary butyl ether (MTBE)	50	52		1	105	70-130	11/25/2019 2109
4-Methyl-2-pentanone	100	110		1	109	70-130	11/25/2019 2109
Methylcyclohexane	50	56		1	112	70-130	11/25/2019 2109
Methylene chloride	50	51		1	102	70-130	11/25/2019 2109
Styrene	50	54		1	108	70-130	11/25/2019 2109
1,1,2,2-Tetrachloroethane	50	50		1	101	70-130	11/25/2019 2109
Tetrachloroethene	50	54		1	108	70-130	11/25/2019 2109
Toluene	50	53		1	107	70-130	11/25/2019 2109
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	53		1	106	70-130	11/25/2019 2109
1,2,4-Trichlorobenzene	50	52		1	104	70-130	11/25/2019 2109
1,1,1-Trichloroethane	50	53		1	106	70-130	11/25/2019 2109
1,1,2-Trichloroethane	50	51		1	103	70-130	11/25/2019 2109

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37056-002

Matrix: Aqueous

Batch: 37056

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	52		1	105	70-130	11/25/2019 2109
Trichlorofluoromethane	50	55		1	109	70-130	11/25/2019 2109
Vinyl chloride	50	48		1	96	70-130	11/25/2019 2109
Xylenes (total)	100	110		1	108	70-130	11/25/2019 2109
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		99			70-130		
Bromofluorobenzene		108			70-130		
Toluene-d8		109			70-130		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37056-003

Matrix: Aqueous

Batch: 37056

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	100		1	105	16	60-140	20	11/26/2019 0248
Benzene	50	50		1	100	5.1	70-130	20	11/26/2019 0248
Bromodichloromethane	50	52		1	103	3.7	70-130	20	11/26/2019 0248
Bromoform	50	50		1	99	9.5	70-130	20	11/26/2019 0248
Bromomethane (Methyl bromide)	50	48		1	96	2.5	70-130	20	11/26/2019 0248
2-Butanone (MEK)	100	100		1	102	8.4	70-130	20	11/26/2019 0248
Carbon disulfide	50	51		1	101	3.2	70-130	20	11/26/2019 0248
Carbon tetrachloride	50	52		1	104	1.7	70-130	20	11/26/2019 0248
Chlorobenzene	50	49		1	97	7.4	70-130	20	11/26/2019 0248
Chloroethane	50	56		1	113	1.4	70-130	20	11/26/2019 0248
Chloroform	50	53		1	106	1.3	70-130	20	11/26/2019 0248
Chloromethane (Methyl chloride)	50	49		1	97	2.0	60-140	20	11/26/2019 0248
Cyclohexane	50	52		1	103	2.2	70-130	20	11/26/2019 0248
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	95	11	70-130	20	11/26/2019 0248
Dibromochloromethane	50	51		1	101	6.6	70-130	20	11/26/2019 0248
1,2-Dibromoethane (EDB)	50	49		1	97	7.1	70-130	20	11/26/2019 0248
1,2-Dichlorobenzene	50	48		1	97	7.7	70-130	20	11/26/2019 0248
1,3-Dichlorobenzene	50	48		1	96	10	70-130	20	11/26/2019 0248
1,4-Dichlorobenzene	50	47		1	94	8.8	70-130	20	11/26/2019 0248
Dichlorodifluoromethane	50	53		1	107	2.8	60-140	20	11/26/2019 0248
1,1-Dichloroethane	50	54		1	107	1.9	70-130	20	11/26/2019 0248
1,2-Dichloroethane	50	49		1	98	3.3	70-130	20	11/26/2019 0248
1,1-Dichloroethene	50	59		1	118	3.1	70-130	20	11/26/2019 0248
cis-1,2-Dichloroethene	50	52		1	105	3.2	70-130	20	11/26/2019 0248
trans-1,2-Dichloroethene	50	55		1	111	3.2	70-130	20	11/26/2019 0248
1,2-Dichloropropane	50	52		1	105	5.1	70-130	20	11/26/2019 0248
cis-1,3-Dichloropropene	50	54		1	107	7.1	70-130	20	11/26/2019 0248
trans-1,3-Dichloropropene	50	53		1	106	10	70-130	20	11/26/2019 0248
Ethylbenzene	50	49		1	99	9.0	70-130	20	11/26/2019 0248
2-Hexanone	100	100		1	103	7.1	70-130	20	11/26/2019 0248
Isopropylbenzene	50	49		1	98	8.2	70-130	20	11/26/2019 0248
Methyl acetate	50	56		1	111	2.1	70-130	20	11/26/2019 0248
Methyl tertiary butyl ether (MTBE)	50	50		1	101	4.1	70-130	20	11/26/2019 0248
4-Methyl-2-pentanone	100	100		1	104	5.2	70-130	20	11/26/2019 0248
Methylcyclohexane	50	52		1	103	8.8	70-130	20	11/26/2019 0248
Methylene chloride	50	50		1	99	2.2	70-130	20	11/26/2019 0248
Styrene	50	50		1	101	6.7	70-130	20	11/26/2019 0248
1,1,2,2-Tetrachloroethane	50	46		1	93	8.4	70-130	20	11/26/2019 0248
Tetrachloroethene	50	49		1	98	9.3	70-130	20	11/26/2019 0248
Toluene	50	49		1	99	7.7	70-130	20	11/26/2019 0248
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	103	2.4	70-130	20	11/26/2019 0248
1,2,4-Trichlorobenzene	50	46		1	93	11	70-130	20	11/26/2019 0248
1,1,1-Trichloroethane	50	51		1	103	3.1	70-130	20	11/26/2019 0248
1,1,2-Trichloroethane	50	48		1	96	6.8	70-130	20	11/26/2019 0248

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37056-003

Matrix: Aqueous

Batch: 37056

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	49		1	98	6.7	70-130	20	11/26/2019 0248
Trichlorofluoromethane	50	54		1	107	1.8	70-130	20	11/26/2019 0248
Vinyl chloride	50	47		1	93	2.2	70-130	20	11/26/2019 0248
Xylenes (total)	100	99		1	99	8.2	70-130	20	11/26/2019 0248
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		102	70-130						
Bromofluorobenzene		106	70-130						
Toluene-d8		108	70-130						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37128-001

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	11/26/2019 1047
Benzene	ND		1	5.0	ug/kg	11/26/2019 1047
Bromodichloromethane	ND		1	5.0	ug/kg	11/26/2019 1047
Bromoform	ND		1	5.0	ug/kg	11/26/2019 1047
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	11/26/2019 1047
2-Butanone (MEK)	ND		1	20	ug/kg	11/26/2019 1047
Carbon disulfide	ND		1	5.0	ug/kg	11/26/2019 1047
Carbon tetrachloride	ND		1	5.0	ug/kg	11/26/2019 1047
Chlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1047
Chloroethane	ND		1	5.0	ug/kg	11/26/2019 1047
Chloroform	ND		1	5.0	ug/kg	11/26/2019 1047
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	11/26/2019 1047
Cyclohexane	ND		1	5.0	ug/kg	11/26/2019 1047
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	11/26/2019 1047
Dibromochloromethane	ND		1	5.0	ug/kg	11/26/2019 1047
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	11/26/2019 1047
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1047
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1047
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1047
Dichlorodifluoromethane	ND		1	5.0	ug/kg	11/26/2019 1047
1,1-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1047
1,2-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1047
1,1-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1047
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1047
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1047
1,2-Dichloropropane	ND		1	5.0	ug/kg	11/26/2019 1047
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1047
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1047
Ethylbenzene	ND		1	5.0	ug/kg	11/26/2019 1047
2-Hexanone	ND		1	10	ug/kg	11/26/2019 1047
Isopropylbenzene	ND		1	5.0	ug/kg	11/26/2019 1047
Methyl acetate	ND		1	5.0	ug/kg	11/26/2019 1047
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	11/26/2019 1047
4-Methyl-2-pentanone	ND		1	10	ug/kg	11/26/2019 1047
Methylcyclohexane	ND		1	5.0	ug/kg	11/26/2019 1047
Methylene chloride	ND		1	5.0	ug/kg	11/26/2019 1047
Styrene	ND		1	5.0	ug/kg	11/26/2019 1047
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	11/26/2019 1047
Tetrachloroethene	ND		1	5.0	ug/kg	11/26/2019 1047
Toluene	ND		1	5.0	ug/kg	11/26/2019 1047
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	11/26/2019 1047
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1047
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1047
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1047

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37128-001

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	11/26/2019 1047
Trichlorofluoromethane	ND		1	5.0	ug/kg	11/26/2019 1047
Vinyl chloride	ND		1	5.0	ug/kg	11/26/2019 1047
Xylenes (total)	ND		1	10	ug/kg	11/26/2019 1047
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		95	53-142			
Bromofluorobenzene		98	47-138			
Toluene-d8		99	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37128-002

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	100	60-140	11/26/2019 1024
Benzene	50	49		1	99	70-130	11/26/2019 1024
Bromodichloromethane	50	51		1	102	70-130	11/26/2019 1024
Bromoform	50	51		1	102	70-130	11/26/2019 1024
Bromomethane (Methyl bromide)	50	47		1	94	70-130	11/26/2019 1024
2-Butanone (MEK)	100	94		1	94	60-140	11/26/2019 1024
Carbon disulfide	50	47		1	95	70-130	11/26/2019 1024
Carbon tetrachloride	50	51		1	102	70-130	11/26/2019 1024
Chlorobenzene	50	50		1	101	70-130	11/26/2019 1024
Chloroethane	50	51		1	102	70-130	11/26/2019 1024
Chloroform	50	51		1	102	70-130	11/26/2019 1024
Chloromethane (Methyl chloride)	50	45		1	90	60-140	11/26/2019 1024
Cyclohexane	50	49		1	98	70-130	11/26/2019 1024
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	70-130	11/26/2019 1024
Dibromochloromethane	50	51		1	103	70-130	11/26/2019 1024
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	11/26/2019 1024
1,2-Dichlorobenzene	50	50		1	99	70-130	11/26/2019 1024
1,3-Dichlorobenzene	50	50		1	101	70-130	11/26/2019 1024
1,4-Dichlorobenzene	50	50		1	101	70-130	11/26/2019 1024
Dichlorodifluoromethane	50	41		1	83	60-140	11/26/2019 1024
1,1-Dichloroethane	50	50		1	100	70-130	11/26/2019 1024
1,2-Dichloroethane	50	49		1	98	70-130	11/26/2019 1024
1,1-Dichloroethene	50	55		1	111	70-130	11/26/2019 1024
cis-1,2-Dichloroethene	50	50		1	101	70-130	11/26/2019 1024
trans-1,2-Dichloroethene	50	54		1	108	70-130	11/26/2019 1024
1,2-Dichloropropane	50	51		1	102	70-130	11/26/2019 1024
cis-1,3-Dichloropropene	50	54		1	108	70-130	11/26/2019 1024
trans-1,3-Dichloropropene	50	54		1	107	70-130	11/26/2019 1024
Ethylbenzene	50	52		1	103	70-130	11/26/2019 1024
2-Hexanone	100	99		1	99	70-130	11/26/2019 1024
Isopropylbenzene	50	50		1	100	70-130	11/26/2019 1024
Methyl acetate	50	48		1	95	70-130	11/26/2019 1024
Methyl tertiary butyl ether (MTBE)	50	49		1	98	70-130	11/26/2019 1024
4-Methyl-2-pentanone	100	95		1	95	70-130	11/26/2019 1024
Methylcyclohexane	50	49		1	99	70-130	11/26/2019 1024
Methylene chloride	50	47		1	95	70-130	11/26/2019 1024
Styrene	50	51		1	102	70-130	11/26/2019 1024
1,1,2,2-Tetrachloroethane	50	48		1	96	70-130	11/26/2019 1024
Tetrachloroethene	50	51		1	102	70-130	11/26/2019 1024
Toluene	50	49		1	98	70-130	11/26/2019 1024
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	94	70-130	11/26/2019 1024
1,2,4-Trichlorobenzene	50	50		1	101	70-130	11/26/2019 1024
1,1,1-Trichloroethane	50	49		1	99	70-130	11/26/2019 1024
1,1,2-Trichloroethane	50	50		1	99	70-130	11/26/2019 1024

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37128-002

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	11/26/2019 1024
Trichlorofluoromethane	50	46		1	92	70-130	11/26/2019 1024
Vinyl chloride	50	43		1	86	70-130	11/26/2019 1024
Xylenes (total)	100	100		1	103	70-130	11/26/2019 1024
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		92	53-142				
Bromofluorobenzene		98	47-138				
Toluene-d8		101	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: UK21098-008DU

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Result (ug/kg)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Acetone	400	450		1	12	20	11/26/2019 1849
Benzene	ND	ND		1	0.00	20	11/26/2019 1849
Bromodichloromethane	ND	ND		1	0.00	20	11/26/2019 1849
Bromoform	ND	ND		1	0.00	20	11/26/2019 1849
Bromomethane (Methyl bromide)	ND	ND		1	0.00	20	11/26/2019 1849
2-Butanone (MEK)	45	ND		1	0.00	20	11/26/2019 1849
Carbon disulfide	ND	ND		1	0.00	20	11/26/2019 1849
Carbon tetrachloride	ND	ND		1	0.00	20	11/26/2019 1849
Chlorobenzene	ND	ND		1	0.00	20	11/26/2019 1849
Chloroethane	ND	ND		1	0.00	20	11/26/2019 1849
Chloroform	ND	ND		1	0.00	20	11/26/2019 1849
Chloromethane (Methyl chloride)	ND	ND		1	0.00	20	11/26/2019 1849
Cyclohexane	ND	ND		1	0.00	20	11/26/2019 1849
1,2-Dibromo-3-chloropropane (DBCP)	ND	ND		1	0.00	20	11/26/2019 1849
Dibromochloromethane	ND	ND		1	0.00	20	11/26/2019 1849
1,2-Dibromoethane (EDB)	ND	ND		1	0.00	20	11/26/2019 1849
1,2-Dichlorobenzene	ND	ND		1	0.00	20	11/26/2019 1849
1,3-Dichlorobenzene	ND	ND		1	0.00	20	11/26/2019 1849
1,4-Dichlorobenzene	ND	ND		1	0.00	20	11/26/2019 1849
Dichlorodifluoromethane	ND	ND		1	0.00	20	11/26/2019 1849
1,1-Dichloroethane	ND	ND		1	0.00	20	11/26/2019 1849
1,2-Dichloroethane	ND	ND		1	0.00	20	11/26/2019 1849
1,1-Dichloroethene	ND	ND		1	0.00	20	11/26/2019 1849
cis-1,2-Dichloroethene	ND	ND		1	0.00	20	11/26/2019 1849
trans-1,2-Dichloroethene	ND	ND		1	0.00	20	11/26/2019 1849
1,2-Dichloropropane	ND	ND		1	0.00	20	11/26/2019 1849
cis-1,3-Dichloropropene	ND	ND		1	0.00	20	11/26/2019 1849
trans-1,3-Dichloropropene	ND	ND		1	0.00	20	11/26/2019 1849
Ethylbenzene	ND	ND		1	0.00	20	11/26/2019 1849
2-Hexanone	ND	ND		1	0.00	20	11/26/2019 1849
Isopropylbenzene	ND	ND		1	0.00	20	11/26/2019 1849
Methyl acetate	ND	ND		1	0.00	20	11/26/2019 1849
Methyl tertiary butyl ether (MTBE)	ND	ND		1	0.00	20	11/26/2019 1849
4-Methyl-2-pentanone	ND	ND		1	0.00	20	11/26/2019 1849
Methylcyclohexane	ND	ND		1	0.00	20	11/26/2019 1849
Methylene chloride	ND	ND		1	0.00	20	11/26/2019 1849
Styrene	ND	ND		1	0.00	20	11/26/2019 1849
1,1,2,2-Tetrachloroethane	ND	ND		1	0.00	20	11/26/2019 1849
Tetrachloroethene	ND	ND		1	0.00	20	11/26/2019 1849
Toluene	ND	ND		1	0.00	20	11/26/2019 1849
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND		1	0.00	20	11/26/2019 1849
1,2,4-Trichlorobenzene	ND	ND		1	0.00	20	11/26/2019 1849
1,1,1-Trichloroethane	ND	ND		1	0.00	20	11/26/2019 1849
1,1,2-Trichloroethane	ND	ND		1	0.00	20	11/26/2019 1849

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - Duplicate

Sample ID: UK21098-008DU

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Result (ug/kg)	Q	Dil	% RPD	% RPD Limit	Analysis Date
Trichloroethene	ND	ND		1	0.00	20	11/26/2019 1849
Trichlorofluoromethane	ND	ND		1	0.00	20	11/26/2019 1849
Vinyl chloride	ND	ND		1	0.00	20	11/26/2019 1849
Xylenes (total)	ND	ND		1	0.00	20	11/26/2019 1849
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		88	53-142				
Bromofluorobenzene		84	47-138				
Toluene-d8		111	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MS

Sample ID: UK21098-010MS

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	180	110	380	N	1	172	70-130	11/26/2019 1826
Benzene	ND	57	52		1	90	70-130	11/26/2019 1826
Bromodichloromethane	ND	57	49		1	86	70-130	11/26/2019 1826
Bromoform	ND	57	46		1	80	70-130	11/26/2019 1826
Bromomethane (Methyl bromide)	ND	57	52		1	90	70-130	11/26/2019 1826
2-Butanone (MEK)	28	110	69	N	1	36	70-130	11/26/2019 1826
Carbon disulfide	ND	57	53		1	93	70-130	11/26/2019 1826
Carbon tetrachloride	ND	57	54		1	94	70-130	11/26/2019 1826
Chlorobenzene	ND	57	54		1	93	70-130	11/26/2019 1826
Chloroethane	ND	57	60		1	104	70-130	11/26/2019 1826
Chloroform	ND	57	52		1	90	70-130	11/26/2019 1826
Chloromethane (Methyl chloride)	ND	57	52		1	90	60-140	11/26/2019 1826
Cyclohexane	ND	57	56		1	97	70-130	11/26/2019 1826
1,2-Dibromo-3-chloropropane (DBCP)	ND	57	56		1	98	70-130	11/26/2019 1826
Dibromochloromethane	ND	57	52		1	90	70-130	11/26/2019 1826
1,2-Dibromoethane (EDB)	ND	57	52		1	91	70-130	11/26/2019 1826
1,2-Dichlorobenzene	ND	57	56		1	97	70-130	11/26/2019 1826
1,3-Dichlorobenzene	ND	57	62		1	108	70-130	11/26/2019 1826
1,4-Dichlorobenzene	ND	57	61		1	107	70-130	11/26/2019 1826
Dichlorodifluoromethane	ND	57	52		1	91	60-140	11/26/2019 1826
1,1-Dichloroethane	ND	57	53		1	92	70-130	11/26/2019 1826
1,2-Dichloroethane	ND	57	48		1	83	70-130	11/26/2019 1826
1,1-Dichloroethene	ND	57	63		1	110	70-130	11/26/2019 1826
cis-1,2-Dichloroethene	ND	57	52		1	90	70-130	11/26/2019 1826
trans-1,2-Dichloroethene	ND	57	58		1	102	70-130	11/26/2019 1826
1,2-Dichloropropane	ND	57	51		1	89	70-130	11/26/2019 1826
cis-1,3-Dichloropropene	ND	57	51		1	89	70-130	11/26/2019 1826
trans-1,3-Dichloropropene	ND	57	57		1	99	70-130	11/26/2019 1826
Ethylbenzene	ND	57	57		1	99	70-130	11/26/2019 1826
2-Hexanone	ND	110	81		1	71	70-130	11/26/2019 1826
Isopropylbenzene	ND	57	52		1	90	70-130	11/26/2019 1826
Methyl acetate	ND	57	94	N	1	163	70-130	11/26/2019 1826
Methyl tertiary butyl ether (MTBE)	ND	57	49		1	85	70-130	11/26/2019 1826
4-Methyl-2-pentanone	ND	110	87		1	76	70-130	11/26/2019 1826
Methylcyclohexane	ND	57	50		1	86	70-130	11/26/2019 1826
Methylene chloride	ND	57	51		1	89	70-130	11/26/2019 1826
Styrene	ND	57	49		1	86	70-130	11/26/2019 1826
1,1,2,2-Tetrachloroethane	ND	57	68		1	117	70-130	11/26/2019 1826
Tetrachloroethene	ND	57	59		1	102	70-130	11/26/2019 1826
Toluene	ND	57	58		1	101	70-130	11/26/2019 1826
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	57	59		1	102	70-130	11/26/2019 1826
1,2,4-Trichlorobenzene	ND	57	35	N	1	61	70-130	11/26/2019 1826
1,1,1-Trichloroethane	ND	57	54		1	94	70-130	11/26/2019 1826
1,1,2-Trichloroethane	ND	57	54		1	94	70-130	11/26/2019 1826

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: UK21098-010MS

Matrix: Solid

Batch: 37128

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	57	52		1	90	70-130	11/26/2019 1826
Trichlorofluoromethane	ND	57	59		1	103	70-130	11/26/2019 1826
Vinyl chloride	ND	57	53		1	92	70-130	11/26/2019 1826
Xylenes (total)	ND	110	110		1	96	70-130	11/26/2019 1826
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		87	53-142					
Bromofluorobenzene		82	47-138					
Toluene-d8		112	68-124					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37193-001

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	11/26/2019 1952
Benzene	ND		1	5.0	ug/kg	11/26/2019 1952
Bromodichloromethane	ND		1	5.0	ug/kg	11/26/2019 1952
Bromoform	ND		1	5.0	ug/kg	11/26/2019 1952
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	11/26/2019 1952
2-Butanone (MEK)	ND		1	20	ug/kg	11/26/2019 1952
Carbon disulfide	ND		1	5.0	ug/kg	11/26/2019 1952
Carbon tetrachloride	ND		1	5.0	ug/kg	11/26/2019 1952
Chlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Chloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
Chloroform	ND		1	5.0	ug/kg	11/26/2019 1952
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	11/26/2019 1952
Cyclohexane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	11/26/2019 1952
Dibromochloromethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Dichlorodifluoromethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichloropropane	ND		1	5.0	ug/kg	11/26/2019 1952
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1952
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1952
Ethylbenzene	ND		1	5.0	ug/kg	11/26/2019 1952
2-Hexanone	ND		1	10	ug/kg	11/26/2019 1952
Isopropylbenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Methyl acetate	ND		1	5.0	ug/kg	11/26/2019 1952
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	11/26/2019 1952
4-Methyl-2-pentanone	ND		1	10	ug/kg	11/26/2019 1952
Methylcyclohexane	ND		1	5.0	ug/kg	11/26/2019 1952
Methylene chloride	ND		1	5.0	ug/kg	11/26/2019 1952
Styrene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
Tetrachloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
Toluene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37193-001

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
Trichlorofluoromethane	ND		1	5.0	ug/kg	11/26/2019 1952
Vinyl chloride	ND		1	5.0	ug/kg	11/26/2019 1952
Xylenes (total)	ND		1	10	ug/kg	11/26/2019 1952
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		109	53-142			
Bromofluorobenzene		110	47-138			
Toluene-d8		119	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Data for Lot Number: UK21098

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37193-002

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	11/26/2019 1851
Benzene	50	50		1	100	70-130	11/26/2019 1851
Bromodichloromethane	50	51		1	103	70-130	11/26/2019 1851
Bromoform	50	53		1	105	70-130	11/26/2019 1851
Bromomethane (Methyl bromide)	50	48		1	95	70-130	11/26/2019 1851
2-Butanone (MEK)	100	100		1	102	60-140	11/26/2019 1851
Carbon disulfide	50	49		1	97	70-130	11/26/2019 1851
Carbon tetrachloride	50	52		1	103	70-130	11/26/2019 1851
Chlorobenzene	50	50		1	101	70-130	11/26/2019 1851
Chloroethane	50	53		1	107	70-130	11/26/2019 1851
Chloroform	50	50		1	100	70-130	11/26/2019 1851
Chloromethane (Methyl chloride)	50	44		1	88	60-140	11/26/2019 1851
Cyclohexane	50	54		1	108	70-130	11/26/2019 1851
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	97	70-130	11/26/2019 1851
Dibromochloromethane	50	52		1	104	70-130	11/26/2019 1851
1,2-Dibromoethane (EDB)	50	51		1	102	70-130	11/26/2019 1851
1,2-Dichlorobenzene	50	51		1	101	70-130	11/26/2019 1851
1,3-Dichlorobenzene	50	51		1	101	70-130	11/26/2019 1851
1,4-Dichlorobenzene	50	51		1	102	70-130	11/26/2019 1851
Dichlorodifluoromethane	50	49		1	99	60-140	11/26/2019 1851
1,1-Dichloroethane	50	49		1	99	70-130	11/26/2019 1851
1,2-Dichloroethane	50	48		1	95	70-130	11/26/2019 1851
1,1-Dichloroethene	50	59		1	118	70-130	11/26/2019 1851
cis-1,2-Dichloroethene	50	50		1	101	70-130	11/26/2019 1851
trans-1,2-Dichloroethene	50	55		1	110	70-130	11/26/2019 1851
1,2-Dichloropropane	50	51		1	102	70-130	11/26/2019 1851
cis-1,3-Dichloropropene	50	53		1	106	70-130	11/26/2019 1851
trans-1,3-Dichloropropene	50	53		1	106	70-130	11/26/2019 1851
Ethylbenzene	50	52		1	103	70-130	11/26/2019 1851
2-Hexanone	100	100		1	100	70-130	11/26/2019 1851
Isopropylbenzene	50	50		1	101	70-130	11/26/2019 1851
Methyl acetate	50	47		1	94	70-130	11/26/2019 1851
Methyl tertiary butyl ether (MTBE)	50	48		1	97	70-130	11/26/2019 1851
4-Methyl-2-pentanone	100	94		1	94	70-130	11/26/2019 1851
Methylcyclohexane	50	55		1	110	70-130	11/26/2019 1851
Methylene chloride	50	48		1	96	70-130	11/26/2019 1851
Styrene	50	51		1	101	70-130	11/26/2019 1851
1,1,2,2-Tetrachloroethane	50	47		1	94	70-130	11/26/2019 1851
Tetrachloroethene	50	57		1	113	70-130	11/26/2019 1851
Toluene	50	51		1	102	70-130	11/26/2019 1851
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	104	70-130	11/26/2019 1851
1,2,4-Trichlorobenzene	50	53		1	106	70-130	11/26/2019 1851
1,1,1-Trichloroethane	50	51		1	103	70-130	11/26/2019 1851
1,1,2-Trichloroethane	50	49		1	98	70-130	11/26/2019 1851

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37193-002

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	11/26/2019 1851
Trichlorofluoromethane	50	54		1	108	70-130	11/26/2019 1851
Vinyl chloride	50	44		1	88	70-130	11/26/2019 1851
Xylenes (total)	100	100		1	102	70-130	11/26/2019 1851
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		103			53-142		
Bromofluorobenzene		120			47-138		
Toluene-d8		118			68-124		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37193-003

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	97		1	97	7.2	60-140	20	11/26/2019 1929
Benzene	50	47		1	94	7.0	70-130	20	11/26/2019 1929
Bromodichloromethane	50	49		1	98	4.6	70-130	20	11/26/2019 1929
Bromoform	50	52		1	103	1.9	70-130	20	11/26/2019 1929
Bromomethane (Methyl bromide)	50	44		1	89	6.7	70-130	20	11/26/2019 1929
2-Butanone (MEK)	100	95		1	95	6.2	60-140	20	11/26/2019 1929
Carbon disulfide	50	43		1	87	11	70-130	20	11/26/2019 1929
Carbon tetrachloride	50	46		1	92	11	70-130	20	11/26/2019 1929
Chlorobenzene	50	48		1	96	4.6	70-130	20	11/26/2019 1929
Chloroethane	50	48		1	96	10	70-130	20	11/26/2019 1929
Chloroform	50	46		1	93	7.7	70-130	20	11/26/2019 1929
Chloromethane (Methyl chloride)	50	40		1	79	11	60-140	20	11/26/2019 1929
Cyclohexane	50	47		1	94	14	70-130	20	11/26/2019 1929
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	0.97	70-130	20	11/26/2019 1929
Dibromochloromethane	50	50		1	100	4.0	70-130	20	11/26/2019 1929
1,2-Dibromoethane (EDB)	50	49		1	98	4.2	70-130	20	11/26/2019 1929
1,2-Dichlorobenzene	50	50		1	99	1.7	70-130	20	11/26/2019 1929
1,3-Dichlorobenzene	50	50		1	99	2.2	70-130	20	11/26/2019 1929
1,4-Dichlorobenzene	50	49		1	99	2.9	70-130	20	11/26/2019 1929
Dichlorodifluoromethane	50	44		1	87	13	60-140	20	11/26/2019 1929
1,1-Dichloroethane	50	45		1	90	9.0	70-130	20	11/26/2019 1929
1,2-Dichloroethane	50	45		1	89	6.5	70-130	20	11/26/2019 1929
1,1-Dichloroethene	50	52		1	105	12	70-130	20	11/26/2019 1929
cis-1,2-Dichloroethene	50	46		1	92	9.0	70-130	20	11/26/2019 1929
trans-1,2-Dichloroethene	50	50		1	99	11	70-130	20	11/26/2019 1929
1,2-Dichloropropane	50	48		1	96	5.7	70-130	20	11/26/2019 1929
cis-1,3-Dichloropropene	50	51		1	102	4.4	70-130	20	11/26/2019 1929
trans-1,3-Dichloropropene	50	51		1	102	3.2	70-130	20	11/26/2019 1929
Ethylbenzene	50	48		1	96	7.2	70-130	20	11/26/2019 1929
2-Hexanone	100	98		1	98	1.8	70-130	20	11/26/2019 1929
Isopropylbenzene	50	48		1	96	5.2	70-130	20	11/26/2019 1929
Methyl acetate	50	46		1	91	3.0	70-130	20	11/26/2019 1929
Methyl tertiary butyl ether (MTBE)	50	46		1	92	4.6	70-130	20	11/26/2019 1929
4-Methyl-2-pentanone	100	91		1	91	3.2	70-130	20	11/26/2019 1929
Methylcyclohexane	50	49		1	98	11	70-130	20	11/26/2019 1929
Methylene chloride	50	45		1	89	7.3	70-130	20	11/26/2019 1929
Styrene	50	48		1	96	5.1	70-130	20	11/26/2019 1929
1,1,2,2-Tetrachloroethane	50	47		1	93	1.2	70-130	20	11/26/2019 1929
Tetrachloroethene	50	52		1	105	7.7	70-130	20	11/26/2019 1929
Toluene	50	48		1	96	6.5	70-130	20	11/26/2019 1929
1,1,2-Trichloro-1,1,2-Trifluoroethane	50	46		1	92	13	70-130	20	11/26/2019 1929
1,2,4-Trichlorobenzene	50	52		1	105	1.3	70-130	20	11/26/2019 1929
1,1,1-Trichloroethane	50	46		1	92	11	70-130	20	11/26/2019 1929
1,1,2-Trichloroethane	50	48		1	96	1.6	70-130	20	11/26/2019 1929

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37193-003

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	49		1	97	8.2	70-130	20	11/26/2019 1929
Trichlorofluoromethane	50	48		1	96	12	70-130	20	11/26/2019 1929
Vinyl chloride	50	40		1	80	10	70-130	20	11/26/2019 1929
Xylenes (total)	100	97		1	97	6.0	70-130	20	11/26/2019 1929
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		100	53-142						
Bromofluorobenzene		120	47-138						
Toluene-d8		119	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37405-001

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acenaphthene	ND		1	13	ug/kg	11/30/2019 1642
Acenaphthylene	ND		1	13	ug/kg	11/30/2019 1642
Acetophenone	ND		1	67	ug/kg	11/30/2019 1642
Anthracene	ND		1	13	ug/kg	11/30/2019 1642
Atrazine	ND		1	67	ug/kg	11/30/2019 1642
Benzaldehyde	ND		1	67	ug/kg	11/30/2019 1642
Benzo(a)anthracene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(a)pyrene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(b)fluoranthene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(g,h,i)perylene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(k)fluoranthene	ND		1	13	ug/kg	11/30/2019 1642
1,1'-Biphenyl	ND		1	67	ug/kg	11/30/2019 1642
4-Bromophenyl phenyl ether	ND		1	67	ug/kg	11/30/2019 1642
Butyl benzyl phthalate	ND		1	67	ug/kg	11/30/2019 1642
Caprolactam	ND		1	67	ug/kg	11/30/2019 1642
Carbazole	ND		1	67	ug/kg	11/30/2019 1642
bis (2-Chloro-1-methylethyl) ether	ND		1	67	ug/kg	11/30/2019 1642
4-Chloro-3-methyl phenol	ND		1	67	ug/kg	11/30/2019 1642
4-Chloroaniline	ND		1	67	ug/kg	11/30/2019 1642
bis(2-Chloroethoxy)methane	ND		1	67	ug/kg	11/30/2019 1642
bis(2-Chloroethyl)ether	ND		1	67	ug/kg	11/30/2019 1642
2-Chloronaphthalene	ND		1	67	ug/kg	11/30/2019 1642
2-Chlorophenol	ND		1	67	ug/kg	11/30/2019 1642
4-Chlorophenyl phenyl ether	ND		1	67	ug/kg	11/30/2019 1642
Chrysene	ND		1	13	ug/kg	11/30/2019 1642
Dibenzo(a,h)anthracene	ND		1	13	ug/kg	11/30/2019 1642
Dibenzofuran	ND		1	67	ug/kg	11/30/2019 1642
3,3'-Dichlorobenzidine	ND		1	67	ug/kg	11/30/2019 1642
2,4-Dichlorophenol	ND		1	67	ug/kg	11/30/2019 1642
Diethylphthalate	ND		1	67	ug/kg	11/30/2019 1642
Dimethyl phthalate	ND		1	67	ug/kg	11/30/2019 1642
2,4-Dimethylphenol	ND		1	67	ug/kg	11/30/2019 1642
Di-n-butyl phthalate	ND		1	67	ug/kg	11/30/2019 1642
4,6-Dinitro-2-methylphenol	ND		1	330	ug/kg	11/30/2019 1642
2,4-Dinitrophenol	ND		1	330	ug/kg	11/30/2019 1642
2,4-Dinitrotoluene	ND		1	130	ug/kg	11/30/2019 1642
2,6-Dinitrotoluene	ND		1	130	ug/kg	11/30/2019 1642
Di-n-octylphthalate	ND		1	67	ug/kg	11/30/2019 1642
bis(2-Ethylhexyl)phthalate	ND		1	67	ug/kg	11/30/2019 1642
Fluoranthene	ND		1	13	ug/kg	11/30/2019 1642
Fluorene	ND		1	13	ug/kg	11/30/2019 1642
Hexachlorobenzene	ND		1	67	ug/kg	11/30/2019 1642
Hexachlorobutadiene	ND		1	67	ug/kg	11/30/2019 1642
Hexachlorocyclopentadiene	ND		1	330	ug/kg	11/30/2019 1642

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37405-001

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Hexachloroethane	ND		1	67	ug/kg	11/30/2019 1642
Indeno(1,2,3-c,d)pyrene	ND		1	13	ug/kg	11/30/2019 1642
Isophorone	ND		1	67	ug/kg	11/30/2019 1642
2-Methylnaphthalene	ND		1	13	ug/kg	11/30/2019 1642
2-Methylphenol	ND		1	67	ug/kg	11/30/2019 1642
3+4-Methylphenol	ND		1	130	ug/kg	11/30/2019 1642
Naphthalene	ND		1	13	ug/kg	11/30/2019 1642
2-Nitroaniline	ND		1	130	ug/kg	11/30/2019 1642
3-Nitroaniline	ND		1	130	ug/kg	11/30/2019 1642
4-Nitroaniline	ND		1	130	ug/kg	11/30/2019 1642
Nitrobenzene	ND		1	67	ug/kg	11/30/2019 1642
2-Nitrophenol	ND		1	130	ug/kg	11/30/2019 1642
4-Nitrophenol	ND		1	330	ug/kg	11/30/2019 1642
N-Nitrosodi-n-propylamine	ND		1	67	ug/kg	11/30/2019 1642
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	ug/kg	11/30/2019 1642
Pentachlorophenol	ND		1	330	ug/kg	11/30/2019 1642
Phenanthrene	ND		1	13	ug/kg	11/30/2019 1642
Phenol	ND		1	67	ug/kg	11/30/2019 1642
Pyrene	ND		1	13	ug/kg	11/30/2019 1642
2,4,5-Trichlorophenol	ND		1	67	ug/kg	11/30/2019 1642
2,4,6-Trichlorophenol	ND		1	67	ug/kg	11/30/2019 1642
Surrogate	Q	% Rec	Acceptance Limit			
2-Fluorobiphenyl		69	24-137			
2-Fluorophenol		68	16-136			
Nitrobenzene-d5		68	12-144			
Phenol-d5		76	26-148			
Terphenyl-d14		84	20-127			
2,4,6-Tribromophenol		52	27-128			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37405-002

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	670	490		1	73	46-114	11/30/2019 1707
Acenaphthylene	670	490		1	74	44-122	11/30/2019 1707
Acetophenone	670	450		1	67	48-111	11/30/2019 1707
Anthracene	670	500		1	75	50-119	11/30/2019 1707
Atrazine	670	490		1	73	48-116	11/30/2019 1707
Benzaldehyde	670	400		1	60	10-110	11/30/2019 1707
Benzo(a)anthracene	670	490		1	73	47-121	11/30/2019 1707
Benzo(a)pyrene	670	520		1	79	55-134	11/30/2019 1707
Benzo(b)fluoranthene	670	490		1	74	28-139	11/30/2019 1707
Benzo(g,h,i)perylene	670	520		1	77	36-125	11/30/2019 1707
Benzo(k)fluoranthene	670	500		1	75	47-130	11/30/2019 1707
1,1'-Biphenyl	670	470		1	71	49-110	11/30/2019 1707
4-Bromophenyl phenyl ether	670	420		1	63	46-118	11/30/2019 1707
Butyl benzyl phthalate	670	650		1	98	46-128	11/30/2019 1707
Caprolactam	670	560		1	85	43-121	11/30/2019 1707
Carbazole	670	500		1	75	47-128	11/30/2019 1707
bis (2-Chloro-1-methylethyl) ether	670	350		1	52	31-102	11/30/2019 1707
4-Chloro-3-methyl phenol	670	570		1	85	49-118	11/30/2019 1707
4-Chloroaniline	670	390		1	58	17-106	11/30/2019 1707
bis(2-Chloroethoxy)methane	670	460		1	68	39-108	11/30/2019 1707
bis(2-Chloroethyl)ether	670	490		1	74	32-105	11/30/2019 1707
2-Chloronaphthalene	670	470		1	70	31-127	11/30/2019 1707
2-Chlorophenol	670	500		1	75	37-106	11/30/2019 1707
4-Chlorophenyl phenyl ether	670	470		1	71	47-116	11/30/2019 1707
Chrysene	670	490		1	73	45-126	11/30/2019 1707
Dibenzo(a,h)anthracene	670	520		1	78	45-122	11/30/2019 1707
Dibenzofuran	670	480		1	73	45-112	11/30/2019 1707
3,3'-Dichlorobenzidine	670	430		1	64	10-119	11/30/2019 1707
2,4-Dichlorophenol	670	490		1	73	41-113	11/30/2019 1707
Diethylphthalate	670	550		1	82	49-123	11/30/2019 1707
Dimethyl phthalate	670	510		1	76	48-120	11/30/2019 1707
2,4-Dimethylphenol	670	650		1	98	33-123	11/30/2019 1707
Di-n-butyl phthalate	670	540		1	81	51-129	11/30/2019 1707
4,6-Dinitro-2-methylphenol	670	470		1	71	40-130	11/30/2019 1707
2,4-Dinitrophenol	1300	890		1	67	10-113	11/30/2019 1707
2,4-Dinitrotoluene	670	540		1	81	48-124	11/30/2019 1707
2,6-Dinitrotoluene	670	510		1	76	47-125	11/30/2019 1707
Di-n-octylphthalate	670	580		1	87	49-142	11/30/2019 1707
bis(2-Ethylhexyl)phthalate	670	550		1	83	45-128	11/30/2019 1707
Fluoranthene	670	470		1	70	50-123	11/30/2019 1707
Fluorene	670	500		1	76	48-117	11/30/2019 1707
Hexachlorobenzene	670	400		1	60	44-122	11/30/2019 1707
Hexachlorobutadiene	670	440		1	65	33-103	11/30/2019 1707
Hexachlorocyclopentadiene	3300	2300		1	69	18-121	11/30/2019 1707

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37405-002

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	670	460		1	69	30-96	11/30/2019 1707
Indeno(1,2,3-c,d)pyrene	670	520		1	78	45-123	11/30/2019 1707
Isophorone	670	500		1	75	41-113	11/30/2019 1707
2-Methylnaphthalene	670	470		1	70	40-106	11/30/2019 1707
2-Methylphenol	670	500		1	75	32-107	11/30/2019 1707
3+4-Methylphenol	670	530		1	80	39-108	11/30/2019 1707
Naphthalene	670	480		1	73	36-110	11/30/2019 1707
2-Nitroaniline	670	540		1	81	45-123	11/30/2019 1707
3-Nitroaniline	670	480		1	71	24-127	11/30/2019 1707
4-Nitroaniline	670	580		1	87	48-127	11/30/2019 1707
Nitrobenzene	670	480		1	72	33-114	11/30/2019 1707
2-Nitrophenol	670	460		1	70	35-108	11/30/2019 1707
4-Nitrophenol	1300	1500		1	109	18-154	11/30/2019 1707
N-Nitrosodi-n-propylamine	670	540		1	81	32-115	11/30/2019 1707
N-Nitrosodiphenylamine (Diphenylamine)	670	490		1	73	53-150	11/30/2019 1707
Pentachlorophenol	1300	820		1	61	27-138	11/30/2019 1707
Phenanthrene	670	480		1	73	49-117	11/30/2019 1707
Phenol	670	520		1	78	36-108	11/30/2019 1707
Pyrene	670	520		1	77	47-119	11/30/2019 1707
2,4,5-Trichlorophenol	670	470		1	71	46-122	11/30/2019 1707
2,4,6-Trichlorophenol	670	470		1	70	38-115	11/30/2019 1707
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		68	24-137				
2-Fluorophenol		72	16-136				
Nitrobenzene-d5		66	12-144				
Phenol-d5		75	26-148				
Terphenyl-d14		80	20-127				
2,4,6-Tribromophenol		55	27-128				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody  
and  
Miscellaneous Documents

101672  
Number

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



Client: Westminster House Telephone No. / Email: 803 647 1720 Sample No. UK21098

Address: SEDI BLUFF RD City: HOPKINS State: SC Zip Code: 29024

Project Name: RF IMPLEMENTATION Report to Contact: Diana Juyter Analysts (At least list if more space is needed): Joyner, P. C. Williams, House, C.

Project No.: 60595649 F.O. No.: 11-21-19 Date: 11-21-19 Time: 09:55

Sample ID / Description (Containers for each sample may be combined on one line)	Date	Time	Methy				No. of Containers by Preservative Type				Remarks / Container I.D.
			100%	50%	25%	12.5%	100%	50%	25%	12.5%	
SED-30 0'-6"	11-21-19	09:55	X	X	X	X	1	1	1	1	
SED-30 6'-12"		10:00	X	X	X	X	1	1	1	1	
SED-31 0'-6"		12:00	X	X	X	X	1	1	1	1	
SED-31 6'-12"		12:05	X	X	X	X	1	1	1	1	
SED-32 0'-6"		14:00	X	X	X	X	1	1	1	1	
SED-32 6'-12"		14:05	X	X	X	X	1	1	1	1	
SED-33 0'-6"		15:00	X	X	X	X	1	1	1	1	
SED-33 6'-12"		15:05	X	X	X	X	1	1	1	1	
SED-34 0'-6"		16:10	X	X	X	X	1	1	1	1	
SED-34 6'-12"		16:15	X	X	X	X	1	1	1	1	

Turn Around Time Required (Prior lab approval required for expedited MAT.)  
 Standard  Rushy (Specify): \_\_\_\_\_  
 1. Retrievished by: Diana Juyter Date: 11-21-19 Time: 17:39  
 2. Retrievished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Retrievished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 4. Retrievished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

OC Requirements (Specify):  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_

Possible Hazard Identification:  
 Air-Hazard  Flammable  Skin Irritant  Poison  Unreactive  
 1. Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 2. Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 4. Laboratory receipt: Shealy Lab Date: 11-21-19 Time: 17:39

LAB USE ONLY  
 Received on Ice (Circle) Yes  No  Ice Pack  Reprint Range: 1.2 °C

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy  
 Document Number: F-AID-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: MB0018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: BMG / 11/21/19 Lot #: UK21098

Means of receipt: <input checked="" type="checkbox"/> SESI <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other: _____		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?	
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>		
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>19-2044</u>		
1.2 / 1.2 °C <u>NA</u> / <u>NA</u> °C <u>NA</u> / <u>NA</u> °C <u>NA</u> / <u>NA</u> °C		
Method: <input checked="" type="checkbox"/> Temperature Blank <input 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None		
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>NA</u>	
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)		
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH using SR # <u>NA</u> .		
Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.		
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.		
Samples(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is <i>no</i> ) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: <u>NA</u> .		
SR barcode labels applied by: <u>BMG</u> Date: <u>11/21/19</u>		

Comments:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

### Westinghouse Electric Company

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: RI Implementation

Project Number: 60595649

Lot Number: **UK22073**

Date Completed: 12/04/2019



12/06/2019 11:15 AM

Approved and released by:  
Project Manager: Grant Wilton



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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: UK22073

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

### Nitrate Analysis – Method 9056A

Sample -011: The original analysis was performed while there were irregularities in the baseline causing inaccurate responses. Reanalysis of the was performed outside of the analytical holding time. The out of hold analysis is reported.

### Volatile Organic Analysis – Method 8260B

Samples -001, -003, -007: Acetone was reported as an estimated value in as the result was above the upper calibration level. The sample was re-analyzed from the medium level (methanol) vial, but was not reported due to the result being below the LOQ therefore only the low level was reported.

### Semivolatile Organic Analysis – Method 8270D

Samples -008, -009: The samples were analyzed at a 5X dilution due to the high concentration of non-target analytes present. The reporting limits were raised accordingly.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: UK22073  
Project Name: RI Implementation  
Project Number: 60595649

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-35 0"-6"	Solid	11/22/2019 0840	11/22/2019
002	SED-35 6"-12"	Solid	11/22/2019 0845	11/22/2019
003	SED-36 0"-6"	Solid	11/22/2019 1000	11/22/2019
004	SED-36 6"-12"	Solid	11/22/2019 1005	11/22/2019
005	SED-37 0"-6"	Solid	11/22/2019 1120	11/22/2019
006	SED-37 6"-12"	Solid	11/22/2019 1125	11/22/2019
007	SED-37 6"-12" DUP	Solid	11/22/2019 1125	11/22/2019
008	SED-40 0"-6"	Solid	11/22/2019 1220	11/22/2019
009	SED-38 0"-6"	Solid	11/22/2019 1450	11/22/2019
010	SED-39 6"-12"	Solid	11/22/2019 1520	11/22/2019
011	EB-01-112219	Aqueous	11/22/2019 1320	11/22/2019
012	TB-01-112219	Aqueous	11/22/2019	11/22/2019

(12 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary  
Westinghouse Electric Company  
Lot Number: UK22073  
Project Name: RI Implementation  
Project Number: 60595649

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-35 0"-6"	Solid	Acetone	8260B	390	E	ug/kg	7
002	SED-35 6"-12"	Solid	Acetone	8260B	310		ug/kg	12
003	SED-36 0"-6"	Solid	Acetone	8260B	370	E	ug/kg	17
004	SED-36 6"-12"	Solid	Nitrate - N (soluble)	9056A	0.55		mg/kg	21
004	SED-36 6"-12"	Solid	Acetone	8260B	350		ug/kg	22
005	SED-37 0"-6"	Solid	Acetone	8260B	300		ug/kg	27
006	SED-37 6"-12"	Solid	Acetone	8260B	350		ug/kg	32
007	SED-37 6"-12" DUP	Solid	Acetone	8260B	360	E	ug/kg	37
008	SED-40 0"-6"	Solid	Acetone	8260B	260		ug/kg	42
009	SED-38 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.66		mg/kg	46
009	SED-38 0"-6"	Solid	Acetone	8260B	400		ug/kg	47

(11 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-001
Description: SED-35 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 0840	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
% Solids: 62.2 11/23/2019 1841	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1422	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-001
Description: SED-35 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 0840	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 62.2 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2035	ALR1		37193	5.63

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	390	E	18	ug/kg	1
Benzene	71-43-2	8260B	ND		4.4	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.4	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.4	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		18	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.4	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.4	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.4	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.4	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.4	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.4	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.4	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.4	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.4	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.4	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.4	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.4	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.4	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.4	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.4	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.4	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.4	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.4	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.4	ug/kg	1
Styrene	100-42-5	8260B	ND		4.4	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.4	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.4	ug/kg	1
Toluene	108-88-3	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.4	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.4	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.4	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-001
Description: SED-35 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 0840	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 62.2 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2035	ALR1		37193	5.63

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.4	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.4	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	53-142
Bromofluorobenzene		109	47-138
Toluene-d8		122	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-001
Description: SED-35 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 0840	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 62.2 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/29/2019 1601	SCD	11/25/2019 1328	36920

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-001
Description: SED-35 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 0840	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 62.2 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/29/2019 1601	SCD	11/25/2019 1328	36920

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		65	24-137
2-Fluorophenol		72	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		79	26-148
Terphenyl-d14		70	20-127
2,4,6-Tribromophenol		58	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-002
Description: SED-35 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 0845	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
% Solids: 69.7 11/23/2019 1841	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1443	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-002
Description: SED-35 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 0845	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 69.7 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2059	ALR1		37193	5.86

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	310		17	ug/kg	1
Benzene	71-43-2	8260B	ND		4.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		17	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.5	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.5	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.3	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.3	ug/kg	1
Styrene	100-42-5	8260B	ND		4.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.3	ug/kg	1
Toluene	108-88-3	8260B	ND		4.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.3	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-002
Description: SED-35 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 0845	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 69.7 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2059	ALR1		37193	5.86

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		111	53-142
Bromofluorobenzene		111	47-138
Toluene-d8		122	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-002
Description: SED-35 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 0845	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 69.7 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2303	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-002
Description: SED-35 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 0845	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 69.7 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2303	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		58	24-137
2-Fluorophenol		59	16-136
Nitrobenzene-d5		52	12-144
Phenol-d5		64	26-148
Terphenyl-d14		70	20-127
2,4,6-Tribromophenol		51	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-003
Description: SED-36 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1000	% Solids: 64.3 11/23/2019 1841
Date Received: 11/22/2019	Project Name: RI Implementation
	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1504	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-003
Description: SED-36 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1000	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 64.3 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2123	ALR1		37193	5.66

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	370	E	18	ug/kg	1
Benzene	71-43-2	8260B	ND		4.4	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.4	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.4	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		18	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.4	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.4	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.4	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.4	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.4	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.4	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.4	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.4	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.4	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.4	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.4	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.4	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.4	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.4	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.4	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.4	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.4	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.4	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.4	ug/kg	1
Styrene	100-42-5	8260B	ND		4.4	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.4	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.4	ug/kg	1
Toluene	108-88-3	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.4	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.4	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.4	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-003
Description: SED-36 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1000	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 64.3 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2123	ALR1		37193	5.66

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.4	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.4	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	53-142
Bromofluorobenzene		104	47-138
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-003

Description: SED-36 0"-6"

Matrix: Solid

Date Sampled: 11/22/2019 1000

Project Name: RI Implementation

% Solids: 64.3 11/23/2019 1841

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2328	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-003
Description: SED-36 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1000	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 64.3 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2328	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	24-137
2-Fluorophenol		73	16-136
Nitrobenzene-d5		60	12-144
Phenol-d5		74	26-148
Terphenyl-d14		69	20-127
2,4,6-Tribromophenol		54	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-004
Description: SED-36 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1005	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 69.6 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1525	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.55		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-004
Description: SED-36 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1005	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 69.6 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2146	ALR1		37193	5.01

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	350		20	ug/kg	1
Benzene	71-43-2	8260B	ND		5.0	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.0	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.0	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.0	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.0	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.0	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.0	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.0	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.0	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.0	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.0	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.0	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.0	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.0	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.0	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.0	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.0	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.0	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.0	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.0	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.0	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.0	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.0	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.0	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.0	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.0	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.0	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.0	ug/kg	1
Styrene	100-42-5	8260B	ND		5.0	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.0	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.0	ug/kg	1
Toluene	108-88-3	8260B	ND		5.0	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.0	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.0	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.0	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.0	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-004
Description: SED-36 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1005	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 69.6 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2146	ALR1		37193	5.01

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.0	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.0	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.0	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		109	53-142
Bromofluorobenzene		106	47-138
Toluene-d8		120	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-004

Description: SED-36 6"-12"

Matrix: Solid

Date Sampled: 11/22/2019 1005

Project Name: RI Implementation

% Solids: 69.6 11/23/2019 1841

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2353	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-004
Description: SED-36 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1005	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 69.6 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	11/30/2019 2353	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		61	24-137
2-Fluorophenol		73	16-136
Nitrobenzene-d5		60	12-144
Phenol-d5		71	26-148
Terphenyl-d14		69	20-127
2,4,6-Tribromophenol		54	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-005
Description: SED-37 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1120	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
% Solids: 54.0 11/23/2019 1841	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1546	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-005
Description: SED-37 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1120	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 54.0 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2210	ALR1		37193	5.09

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	300		20	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	ug/kg	1
Styrene	100-42-5	8260B	ND		4.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-005
Description: SED-37 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1120	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 54.0 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2210	ALR1		37193	5.09

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	53-142
Bromofluorobenzene		100	47-138
Toluene-d8		120	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-005

Description: SED-37 0"-6"

Matrix: Solid

Date Sampled: 11/22/2019 1120

Project Name: RI Implementation

% Solids: 54.0 11/23/2019 1841

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0018	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-005
Description: SED-37 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1120	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 54.0 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0018	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	24-137
2-Fluorophenol		74	16-136
Nitrobenzene-d5		61	12-144
Phenol-d5		74	26-148
Terphenyl-d14		69	20-127
2,4,6-Tribromophenol		54	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-006
Description: SED-37 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
% Solids: 66.1 11/23/2019 1841	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1607	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-006
Description: SED-37 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 66.1 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2234	ALR1		37193	5.59

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	350		18	ug/kg	1
Benzene	71-43-2	8260B	ND		4.5	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.5	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.5	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.5	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		18	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.5	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.5	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.5	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.5	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.5	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.5	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.5	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.5	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.5	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.5	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.5	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.5	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.5	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.5	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.5	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.5	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.5	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.5	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.5	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.5	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.5	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.5	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.5	ug/kg	1
Styrene	100-42-5	8260B	ND		4.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.5	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.5	ug/kg	1
Toluene	108-88-3	8260B	ND		4.5	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.5	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.5	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.5	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-006
Description: SED-37 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 66.1 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2234	ALR1		37193	5.59

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.5	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.5	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.5	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		111	53-142
Bromofluorobenzene		107	47-138
Toluene-d8		122	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-006

Description: SED-37 6"-12"

Matrix: Solid

Date Sampled: 11/22/2019 1125

Project Name: RI Implementation

% Solids: 66.1 11/23/2019 1841

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0043	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-006
Description: SED-37 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 66.1 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0043	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		58	24-137
2-Fluorophenol		70	16-136
Nitrobenzene-d5		56	12-144
Phenol-d5		69	26-148
Terphenyl-d14		65	20-127
2,4,6-Tribromophenol		53	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-007
Description: SED-37 6"-12" DUP	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 64.5 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1628	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-007
Description: SED-37 6"-12" DUP	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 64.5 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2258	ALR1		37193	5.62

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	360	E	18	ug/kg	1
Benzene	71-43-2	8260B	ND		4.4	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.4	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.4	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.4	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		18	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.4	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.4	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.4	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.4	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.4	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.4	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.4	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.4	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.4	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.4	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.4	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.4	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.4	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.4	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.4	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.4	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.4	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.4	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.4	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		8.9	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.4	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.4	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.4	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		8.9	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.4	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.4	ug/kg	1
Styrene	100-42-5	8260B	ND		4.4	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.4	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.4	ug/kg	1
Toluene	108-88-3	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.4	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.4	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.4	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.4	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-007
Description: SED-37 6"-12" DUP	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 64.5 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2258	ALR1		37193	5.62

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.4	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.4	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.4	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		8.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		112	53-142
Bromofluorobenzene		105	47-138
Toluene-d8		124	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-007
Description: SED-37 6"-12" DUP	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 64.5 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0109	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		310	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		310	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		310	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-007
Description: SED-37 6"-12" DUP	Matrix: Solid
Date Sampled: 11/22/2019 1125	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 64.5 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0109	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		310	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		310	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		55	24-137
2-Fluorophenol		64	16-136
Nitrobenzene-d5		53	12-144
Phenol-d5		65	26-148
Terphenyl-d14		66	20-127
2,4,6-Tribromophenol		50	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-008
Description: SED-40 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1220	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 58.9 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1649	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-008
Description: SED-40 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1220	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 58.9 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2159	ALR1		37197	4.71

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	260		21	ug/kg	1
Benzene	71-43-2	8260B	ND		5.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		11	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		11	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.3	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.3	ug/kg	1
Styrene	100-42-5	8260B	ND		5.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.3	ug/kg	1
Toluene	108-88-3	8260B	ND		5.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.3	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-008
Description: SED-40 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1220	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 58.9 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/26/2019 2159	ALR1		37197	4.71

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		93	53-142
Bromofluorobenzene		83	47-138
Toluene-d8		117	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-008

Description: SED-40 0"-6"

Matrix: Solid

Date Sampled: 11/22/2019 1220

Project Name: RI Implementation

% Solids: 58.9 11/23/2019 1841

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 1940	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		64	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		64	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		64	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		64	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		64	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		64	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		64	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		64	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		64	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		64	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		630	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		630	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		64	ug/kg	1
Fluorene	86-73-7	8270D	ND		64	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-008
Description: SED-40 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1220	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 58.9 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	11/30/2019 1940	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		64	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		64	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		630	ug/kg	1
Naphthalene	91-20-3	8270D	ND		64	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		630	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		630	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		630	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		630	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		64	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		64	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		48	24-137
2-Fluorophenol		45	16-136
Nitrobenzene-d5		50	12-144
Phenol-d5		45	26-148
Terphenyl-d14		53	20-127
2,4,6-Tribromophenol		92	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-009
Description: SED-38 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1450	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 72.5 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1834	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.66		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-009
Description: SED-38 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1450	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 72.5 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1059	JM1		37558	4.19

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	400		24	ug/kg	2
Benzene	71-43-2	8260B	ND		6.0	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.0	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.0	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.0	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		24	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.0	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.0	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.0	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.0	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.0	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.0	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.0	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.0	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.0	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.0	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.0	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.0	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.0	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.0	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.0	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.0	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.0	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.0	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.0	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.0	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.0	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.0	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.0	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.0	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.0	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.0	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.0	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.0	ug/kg	2
Styrene	100-42-5	8260B	ND		6.0	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.0	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.0	ug/kg	2
Toluene	108-88-3	8260B	ND		6.0	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.0	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.0	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.0	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.0	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-009
Description: SED-38 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1450	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 72.5 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1059	JM1		37558	4.19

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.0	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.0	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.0	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		85	53-142
Bromofluorobenzene		87	47-138
Toluene-d8		112	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-009

Description: SED-38 0"-6"

Matrix: Solid

Date Sampled: 11/22/2019 1450

Project Name: RI Implementation

% Solids: 72.5 11/23/2019 1841

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/01/2019 0134	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-009
Description: SED-38 0"-6"	Matrix: Solid
Date Sampled: 11/22/2019 1450	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 72.5 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/01/2019 0134	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		58	24-137
2-Fluorophenol		57	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		58	26-148
Terphenyl-d14		66	20-127
2,4,6-Tribromophenol		93	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-010
Description: SED-39 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1520	% Solids: 57.4 11/23/2019 1841
Date Received: 11/22/2019	Project Name: RI Implementation
	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1855	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-010
Description: SED-39 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1520	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 57.4 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1122	JM1		37558	5.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		19	ug/kg	2
Benzene	71-43-2	8260B	ND		4.9	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		4.9	ug/kg	2
Bromoform	75-25-2	8260B	ND		4.9	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		19	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		4.9	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		4.9	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		4.9	ug/kg	2
Chloroethane	75-00-3	8260B	ND		4.9	ug/kg	2
Chloroform	67-66-3	8260B	ND		4.9	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		4.9	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		4.9	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		4.9	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		9.7	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		4.9	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		4.9	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.7	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		4.9	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		4.9	ug/kg	2
Styrene	100-42-5	8260B	ND		4.9	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		4.9	ug/kg	2
Toluene	108-88-3	8260B	ND		4.9	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-010
Description: SED-39 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1520	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649
	% Solids: 57.4 11/23/2019 1841

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1122	JM1		37558	5.14

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		4.9	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		9.7	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		87	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-010

Description: SED-39 6"-12"

Matrix: Solid

Date Sampled: 11/22/2019 1520

Project Name: RI Implementation

% Solids: 57.4 11/23/2019 1841

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0159	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-010
Description: SED-39 6"-12"	Matrix: Solid
Date Sampled: 11/22/2019 1520	Project Name: RI Implementation
Date Received: 11/22/2019	% Solids: 57.4 11/23/2019 1841
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/01/2019 0159	SCD	11/29/2019 1156	37405

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		55	24-137
2-Fluorophenol		56	16-136
Nitrobenzene-d5		53	12-144
Phenol-d5		59	26-148
Terphenyl-d14		64	20-127
2,4,6-Tribromophenol		49	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK22073-011
Description: EB-01-112219	Matrix: Aqueous
Date Sampled: 11/22/2019 1320	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2		(Nitrate - N) 353.2	1	11/26/2019 1225	AMR		37124

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND	H	0.020	mg/L	2

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-011
Description: EB-01-112219	Matrix: Aqueous
Date Sampled: 11/22/2019 1320	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/25/2019 1222	JJG		36932

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-011
Description: EB-01-112219	Matrix: Aqueous
Date Sampled: 11/22/2019 1320	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/25/2019 1222	JJG		36932

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		87	70-130
Toluene-d8		95	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## Semivolatle Organic Compounds by GC/MS

Client: Westinghouse Electric Company

Laboratory ID: UK22073-011

Description: EB-01-112219

Matrix: Aqueous

Date Sampled: 11/22/2019 1320

Project Name: RI Implementation

Date Received: 11/22/2019

Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/01/2019 2008	SCD	11/27/2019 1752	37330

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation

B = Detected in the method blank

E = Quantitation of compound exceeded the calibration range

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

H = Out of holding time

W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-011
Description: EB-01-112219	Matrix: Aqueous
Date Sampled: 11/22/2019 1320	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/01/2019 2008	SCD	11/27/2019 1752	37330

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		61	37-129
2-Fluorophenol		36	24-127
Nitrobenzene-d5		54	38-127
Phenol-d5		48	28-128
Terphenyl-d14		79	10-148
2,4,6-Tribromophenol		59	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-012
Description: TB-01-112219	Matrix: Aqueous
Date Sampled: 11/22/2019	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/25/2019 1313	JM1		36951

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

Shealy Environmental Services, Inc.  
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK22073-012
Description: TB-01-112219	Matrix: Aqueous
Date Sampled: 11/22/2019	Project Name: RI Implementation
Date Received: 11/22/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/25/2019 1313	JM1		36951

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		99	70-130
Toluene-d8		97	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## QC Summary

# Inorganic non-metals - MB

Sample ID: UQ37124-001

Matrix: Aqueous

Batch: 37124

Analytical Method: 353.2

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N	ND		1	0.020	mg/L	11/26/2019 1223

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - LCS

Sample ID: UQ37124-002

Matrix: Aqueous

Batch: 37124

Analytical Method: 353.2

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.80		1	100	90-110	11/26/2019 1224

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MB

Sample ID: UQ37869-001

Matrix: Solid

Batch: 37869

Analytical Method: 9056A

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N (soluble)	ND		1	0.50	mg/kg	12/03/2019 1028

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Inorganic non-metals - LCS

Sample ID: UQ37869-002

Matrix: Solid

Batch: 37869

Analytical Method: 9056A

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	0.80	0.78		1	98	80-120	12/03/2019 1051

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MS

Sample ID: UK22073-008MS

Matrix: Solid

Batch: 37869

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	ND	8.0	7.4		1	93	80-120	12/03/2019 1710

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MSD

Sample ID: UK22073-008MD

Matrix: Solid

Batch: 37869

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N (soluble)	ND	8.0	7.4		1	92	0.51	80-120	20	12/03/2019 1731

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ36932-001

Matrix: Aqueous

Batch: 36932

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	11/25/2019 1106
Benzene	ND		1	1.0	ug/L	11/25/2019 1106
Bromodichloromethane	ND		1	1.0	ug/L	11/25/2019 1106
Bromoform	ND		1	1.0	ug/L	11/25/2019 1106
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	11/25/2019 1106
2-Butanone (MEK)	ND		1	10	ug/L	11/25/2019 1106
Carbon disulfide	ND		1	1.0	ug/L	11/25/2019 1106
Carbon tetrachloride	ND		1	1.0	ug/L	11/25/2019 1106
Chlorobenzene	ND		1	1.0	ug/L	11/25/2019 1106
Chloroethane	ND		1	2.0	ug/L	11/25/2019 1106
Chloroform	ND		1	1.0	ug/L	11/25/2019 1106
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	11/25/2019 1106
Cyclohexane	ND		1	1.0	ug/L	11/25/2019 1106
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	11/25/2019 1106
Dibromochloromethane	ND		1	1.0	ug/L	11/25/2019 1106
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	11/25/2019 1106
1,2-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1106
1,3-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1106
1,4-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1106
Dichlorodifluoromethane	ND		1	2.0	ug/L	11/25/2019 1106
1,1-Dichloroethane	ND		1	1.0	ug/L	11/25/2019 1106
1,2-Dichloroethane	ND		1	1.0	ug/L	11/25/2019 1106
1,1-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 1106
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 1106
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 1106
1,2-Dichloropropane	ND		1	1.0	ug/L	11/25/2019 1106
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	11/25/2019 1106
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	11/25/2019 1106
Ethylbenzene	ND		1	1.0	ug/L	11/25/2019 1106
2-Hexanone	ND		1	10	ug/L	11/25/2019 1106
Isopropylbenzene	ND		1	1.0	ug/L	11/25/2019 1106
Methyl acetate	ND		1	1.0	ug/L	11/25/2019 1106
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	11/25/2019 1106
4-Methyl-2-pentanone	ND		1	10	ug/L	11/25/2019 1106
Methylcyclohexane	ND		1	5.0	ug/L	11/25/2019 1106
Methylene chloride	ND		1	1.0	ug/L	11/25/2019 1106
Styrene	ND		1	1.0	ug/L	11/25/2019 1106
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	11/25/2019 1106
Tetrachloroethene	ND		1	1.0	ug/L	11/25/2019 1106
Toluene	ND		1	1.0	ug/L	11/25/2019 1106
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	11/25/2019 1106
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1106
1,1,1-Trichloroethane	ND		1	1.0	ug/L	11/25/2019 1106
1,1,2-Trichloroethane	ND		1	1.0	ug/L	11/25/2019 1106

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ36932-001

Matrix: Aqueous

Batch: 36932

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	11/25/2019 1106
Trichlorofluoromethane	ND		1	1.0	ug/L	11/25/2019 1106
Vinyl chloride	ND		1	1.0	ug/L	11/25/2019 1106
Xylenes (total)	ND		1	1.0	ug/L	11/25/2019 1106
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		102	70-130			
Bromofluorobenzene		91	70-130			
Toluene-d8		102	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ36932-002

Matrix: Aqueous

Batch: 36932

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	130		1	126	60-140	11/25/2019 1016
Benzene	50	51		1	103	70-130	11/25/2019 1016
Bromodichloromethane	50	52		1	104	70-130	11/25/2019 1016
Bromoform	50	51		1	102	70-130	11/25/2019 1016
Bromomethane (Methyl bromide)	50	52		1	104	70-130	11/25/2019 1016
2-Butanone (MEK)	100	110		1	105	70-130	11/25/2019 1016
Carbon disulfide	50	48		1	95	70-130	11/25/2019 1016
Carbon tetrachloride	50	52		1	105	70-130	11/25/2019 1016
Chlorobenzene	50	49		1	98	70-130	11/25/2019 1016
Chloroethane	50	58		1	115	70-130	11/25/2019 1016
Chloroform	50	52		1	103	70-130	11/25/2019 1016
Chloromethane (Methyl chloride)	50	45		1	90	60-140	11/25/2019 1016
Cyclohexane	50	51		1	102	70-130	11/25/2019 1016
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	90	70-130	11/25/2019 1016
Dibromochloromethane	50	50		1	100	70-130	11/25/2019 1016
1,2-Dibromoethane (EDB)	50	50		1	100	70-130	11/25/2019 1016
1,2-Dichlorobenzene	50	49		1	98	70-130	11/25/2019 1016
1,3-Dichlorobenzene	50	49		1	98	70-130	11/25/2019 1016
1,4-Dichlorobenzene	50	48		1	96	70-130	11/25/2019 1016
Dichlorodifluoromethane	50	41		1	81	60-140	11/25/2019 1016
1,1-Dichloroethane	50	50		1	100	70-130	11/25/2019 1016
1,2-Dichloroethane	50	51		1	101	70-130	11/25/2019 1016
1,1-Dichloroethene	50	57		1	114	70-130	11/25/2019 1016
cis-1,2-Dichloroethene	50	51		1	101	70-130	11/25/2019 1016
trans-1,2-Dichloroethene	50	53		1	106	70-130	11/25/2019 1016
1,2-Dichloropropane	50	50		1	101	70-130	11/25/2019 1016
cis-1,3-Dichloropropene	50	53		1	106	70-130	11/25/2019 1016
trans-1,3-Dichloropropene	50	53		1	106	70-130	11/25/2019 1016
Ethylbenzene	50	51		1	102	70-130	11/25/2019 1016
2-Hexanone	100	95		1	95	70-130	11/25/2019 1016
Isopropylbenzene	50	52		1	105	70-130	11/25/2019 1016
Methyl acetate	50	45		1	90	70-130	11/25/2019 1016
Methyl tertiary butyl ether (MTBE)	50	55		1	109	70-130	11/25/2019 1016
4-Methyl-2-pentanone	100	99		1	99	70-130	11/25/2019 1016
Methylcyclohexane	50	56		1	111	70-130	11/25/2019 1016
Methylene chloride	50	50		1	100	70-130	11/25/2019 1016
Styrene	50	52		1	104	70-130	11/25/2019 1016
1,1,2,2-Tetrachloroethane	50	47		1	95	70-130	11/25/2019 1016
Tetrachloroethene	50	53		1	106	70-130	11/25/2019 1016
Toluene	50	50		1	99	70-130	11/25/2019 1016
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	54		1	109	70-130	11/25/2019 1016
1,2,4-Trichlorobenzene	50	44		1	89	70-130	11/25/2019 1016
1,1,1-Trichloroethane	50	52		1	103	70-130	11/25/2019 1016
1,1,2-Trichloroethane	50	50		1	100	70-130	11/25/2019 1016

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ36932-002

Matrix: Aqueous

Batch: 36932

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	101	70-130	11/25/2019 1016
Trichlorofluoromethane	50	51		1	103	70-130	11/25/2019 1016
Vinyl chloride	50	50		1	100	70-130	11/25/2019 1016
Xylenes (total)	100	100		1	101	70-130	11/25/2019 1016
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		106			70-130		
Bromofluorobenzene		95			70-130		
Toluene-d8		107			70-130		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ36951-001

Matrix: Aqueous

Batch: 36951

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	11/25/2019 1014
Benzene	ND		1	1.0	ug/L	11/25/2019 1014
Bromodichloromethane	ND		1	1.0	ug/L	11/25/2019 1014
Bromoform	ND		1	1.0	ug/L	11/25/2019 1014
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	11/25/2019 1014
2-Butanone (MEK)	ND		1	10	ug/L	11/25/2019 1014
Carbon disulfide	ND		1	1.0	ug/L	11/25/2019 1014
Carbon tetrachloride	ND		1	1.0	ug/L	11/25/2019 1014
Chlorobenzene	ND		1	1.0	ug/L	11/25/2019 1014
Chloroethane	ND		1	2.0	ug/L	11/25/2019 1014
Chloroform	ND		1	1.0	ug/L	11/25/2019 1014
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	11/25/2019 1014
Cyclohexane	ND		1	1.0	ug/L	11/25/2019 1014
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	11/25/2019 1014
Dibromochloromethane	ND		1	1.0	ug/L	11/25/2019 1014
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	11/25/2019 1014
1,2-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1014
1,3-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1014
1,4-Dichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1014
Dichlorodifluoromethane	ND		1	2.0	ug/L	11/25/2019 1014
1,1-Dichloroethane	ND		1	1.0	ug/L	11/25/2019 1014
1,2-Dichloroethane	ND		1	1.0	ug/L	11/25/2019 1014
1,1-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 1014
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 1014
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	11/25/2019 1014
1,2-Dichloropropane	ND		1	1.0	ug/L	11/25/2019 1014
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	11/25/2019 1014
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	11/25/2019 1014
Ethylbenzene	ND		1	1.0	ug/L	11/25/2019 1014
2-Hexanone	ND		1	10	ug/L	11/25/2019 1014
Isopropylbenzene	ND		1	1.0	ug/L	11/25/2019 1014
Methyl acetate	ND		1	1.0	ug/L	11/25/2019 1014
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	11/25/2019 1014
4-Methyl-2-pentanone	ND		1	10	ug/L	11/25/2019 1014
Methylcyclohexane	ND		1	5.0	ug/L	11/25/2019 1014
Methylene chloride	ND		1	1.0	ug/L	11/25/2019 1014
Styrene	ND		1	1.0	ug/L	11/25/2019 1014
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	11/25/2019 1014
Tetrachloroethene	ND		1	1.0	ug/L	11/25/2019 1014
Toluene	ND		1	1.0	ug/L	11/25/2019 1014
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	11/25/2019 1014
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	11/25/2019 1014
1,1,1-Trichloroethane	ND		1	1.0	ug/L	11/25/2019 1014
1,1,2-Trichloroethane	ND		1	1.0	ug/L	11/25/2019 1014

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ36951-001

Matrix: Aqueous

Batch: 36951

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	11/25/2019 1014
Trichlorofluoromethane	ND		1	1.0	ug/L	11/25/2019 1014
Vinyl chloride	ND		1	1.0	ug/L	11/25/2019 1014
Xylenes (total)	ND		1	1.0	ug/L	11/25/2019 1014
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		87	70-130			
Bromofluorobenzene		95	70-130			
Toluene-d8		94	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ36951-002

Matrix: Aqueous

Batch: 36951

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	71		1	71	60-140	11/25/2019 0926
Benzene	50	45		1	91	70-130	11/25/2019 0926
Bromodichloromethane	50	48		1	97	70-130	11/25/2019 0926
Bromoform	50	44		1	88	70-130	11/25/2019 0926
Bromomethane (Methyl bromide)	50	44		1	87	70-130	11/25/2019 0926
2-Butanone (MEK)	100	94		1	94	70-130	11/25/2019 0926
Carbon disulfide	50	44		1	89	70-130	11/25/2019 0926
Carbon tetrachloride	50	44		1	89	70-130	11/25/2019 0926
Chlorobenzene	50	45		1	91	70-130	11/25/2019 0926
Chloroethane	50	48		1	97	70-130	11/25/2019 0926
Chloroform	50	45		1	90	70-130	11/25/2019 0926
Chloromethane (Methyl chloride)	50	43		1	86	60-140	11/25/2019 0926
Cyclohexane	50	43		1	86	70-130	11/25/2019 0926
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	93	70-130	11/25/2019 0926
Dibromochloromethane	50	50		1	99	70-130	11/25/2019 0926
1,2-Dibromoethane (EDB)	50	48		1	95	70-130	11/25/2019 0926
1,2-Dichlorobenzene	50	47		1	93	70-130	11/25/2019 0926
1,3-Dichlorobenzene	50	46		1	93	70-130	11/25/2019 0926
1,4-Dichlorobenzene	50	45		1	90	70-130	11/25/2019 0926
Dichlorodifluoromethane	50	47		1	94	60-140	11/25/2019 0926
1,1-Dichloroethane	50	44		1	89	70-130	11/25/2019 0926
1,2-Dichloroethane	50	43		1	85	70-130	11/25/2019 0926
1,1-Dichloroethene	50	50		1	100	70-130	11/25/2019 0926
cis-1,2-Dichloroethene	50	44		1	89	70-130	11/25/2019 0926
trans-1,2-Dichloroethene	50	47		1	94	70-130	11/25/2019 0926
1,2-Dichloropropane	50	46		1	93	70-130	11/25/2019 0926
cis-1,3-Dichloropropene	50	52		1	104	70-130	11/25/2019 0926
trans-1,3-Dichloropropene	50	51		1	103	70-130	11/25/2019 0926
Ethylbenzene	50	47		1	94	70-130	11/25/2019 0926
2-Hexanone	100	100		1	101	70-130	11/25/2019 0926
Isopropylbenzene	50	49		1	97	70-130	11/25/2019 0926
Methyl acetate	50	43		1	87	70-130	11/25/2019 0926
Methyl tertiary butyl ether (MTBE)	50	43		1	85	70-130	11/25/2019 0926
4-Methyl-2-pentanone	100	98		1	98	70-130	11/25/2019 0926
Methylcyclohexane	50	47		1	95	70-130	11/25/2019 0926
Methylene chloride	50	40		1	81	70-130	11/25/2019 0926
Styrene	50	50		1	99	70-130	11/25/2019 0926
1,1,2,2-Tetrachloroethane	50	46		1	92	70-130	11/25/2019 0926
Tetrachloroethene	50	46		1	93	70-130	11/25/2019 0926
Toluene	50	46		1	91	70-130	11/25/2019 0926
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	43		1	85	70-130	11/25/2019 0926
1,2,4-Trichlorobenzene	50	48		1	96	70-130	11/25/2019 0926
1,1,1-Trichloroethane	50	44		1	89	70-130	11/25/2019 0926
1,1,2-Trichloroethane	50	46		1	92	70-130	11/25/2019 0926

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ36951-002

Matrix: Aqueous

Batch: 36951

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	46		1	92	70-130	11/25/2019 0926
Trichlorofluoromethane	50	44		1	89	70-130	11/25/2019 0926
Vinyl chloride	50	42		1	83	70-130	11/25/2019 0926
Xylenes (total)	100	97		1	97	70-130	11/25/2019 0926
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		87			70-130		
Bromofluorobenzene		99			70-130		
Toluene-d8		96			70-130		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37193-001

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	11/26/2019 1952
Benzene	ND		1	5.0	ug/kg	11/26/2019 1952
Bromodichloromethane	ND		1	5.0	ug/kg	11/26/2019 1952
Bromoform	ND		1	5.0	ug/kg	11/26/2019 1952
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	11/26/2019 1952
2-Butanone (MEK)	ND		1	20	ug/kg	11/26/2019 1952
Carbon disulfide	ND		1	5.0	ug/kg	11/26/2019 1952
Carbon tetrachloride	ND		1	5.0	ug/kg	11/26/2019 1952
Chlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Chloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
Chloroform	ND		1	5.0	ug/kg	11/26/2019 1952
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	11/26/2019 1952
Cyclohexane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	11/26/2019 1952
Dibromochloromethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Dichlorodifluoromethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichloropropane	ND		1	5.0	ug/kg	11/26/2019 1952
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1952
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1952
Ethylbenzene	ND		1	5.0	ug/kg	11/26/2019 1952
2-Hexanone	ND		1	10	ug/kg	11/26/2019 1952
Isopropylbenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Methyl acetate	ND		1	5.0	ug/kg	11/26/2019 1952
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	11/26/2019 1952
4-Methyl-2-pentanone	ND		1	10	ug/kg	11/26/2019 1952
Methylcyclohexane	ND		1	5.0	ug/kg	11/26/2019 1952
Methylene chloride	ND		1	5.0	ug/kg	11/26/2019 1952
Styrene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
Tetrachloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
Toluene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37193-001

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
Trichlorofluoromethane	ND		1	5.0	ug/kg	11/26/2019 1952
Vinyl chloride	ND		1	5.0	ug/kg	11/26/2019 1952
Xylenes (total)	ND		1	10	ug/kg	11/26/2019 1952
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		109	53-142			
Bromofluorobenzene		110	47-138			
Toluene-d8		119	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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QC Data for Lot Number: UK22073

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37193-002

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	11/26/2019 1851
Benzene	50	50		1	100	70-130	11/26/2019 1851
Bromodichloromethane	50	51		1	103	70-130	11/26/2019 1851
Bromoform	50	53		1	105	70-130	11/26/2019 1851
Bromomethane (Methyl bromide)	50	48		1	95	70-130	11/26/2019 1851
2-Butanone (MEK)	100	100		1	102	60-140	11/26/2019 1851
Carbon disulfide	50	49		1	97	70-130	11/26/2019 1851
Carbon tetrachloride	50	52		1	103	70-130	11/26/2019 1851
Chlorobenzene	50	50		1	101	70-130	11/26/2019 1851
Chloroethane	50	53		1	107	70-130	11/26/2019 1851
Chloroform	50	50		1	100	70-130	11/26/2019 1851
Chloromethane (Methyl chloride)	50	44		1	88	60-140	11/26/2019 1851
Cyclohexane	50	54		1	108	70-130	11/26/2019 1851
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	97	70-130	11/26/2019 1851
Dibromochloromethane	50	52		1	104	70-130	11/26/2019 1851
1,2-Dibromoethane (EDB)	50	51		1	102	70-130	11/26/2019 1851
1,2-Dichlorobenzene	50	51		1	101	70-130	11/26/2019 1851
1,3-Dichlorobenzene	50	51		1	101	70-130	11/26/2019 1851
1,4-Dichlorobenzene	50	51		1	102	70-130	11/26/2019 1851
Dichlorodifluoromethane	50	49		1	99	60-140	11/26/2019 1851
1,1-Dichloroethane	50	49		1	99	70-130	11/26/2019 1851
1,2-Dichloroethane	50	48		1	95	70-130	11/26/2019 1851
1,1-Dichloroethene	50	59		1	118	70-130	11/26/2019 1851
cis-1,2-Dichloroethene	50	50		1	101	70-130	11/26/2019 1851
trans-1,2-Dichloroethene	50	55		1	110	70-130	11/26/2019 1851
1,2-Dichloropropane	50	51		1	102	70-130	11/26/2019 1851
cis-1,3-Dichloropropene	50	53		1	106	70-130	11/26/2019 1851
trans-1,3-Dichloropropene	50	53		1	106	70-130	11/26/2019 1851
Ethylbenzene	50	52		1	103	70-130	11/26/2019 1851
2-Hexanone	100	100		1	100	70-130	11/26/2019 1851
Isopropylbenzene	50	50		1	101	70-130	11/26/2019 1851
Methyl acetate	50	47		1	94	70-130	11/26/2019 1851
Methyl tertiary butyl ether (MTBE)	50	48		1	97	70-130	11/26/2019 1851
4-Methyl-2-pentanone	100	94		1	94	70-130	11/26/2019 1851
Methylcyclohexane	50	55		1	110	70-130	11/26/2019 1851
Methylene chloride	50	48		1	96	70-130	11/26/2019 1851
Styrene	50	51		1	101	70-130	11/26/2019 1851
1,1,2,2-Tetrachloroethane	50	47		1	94	70-130	11/26/2019 1851
Tetrachloroethene	50	57		1	113	70-130	11/26/2019 1851
Toluene	50	51		1	102	70-130	11/26/2019 1851
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	104	70-130	11/26/2019 1851
1,2,4-Trichlorobenzene	50	53		1	106	70-130	11/26/2019 1851
1,1,1-Trichloroethane	50	51		1	103	70-130	11/26/2019 1851
1,1,2-Trichloroethane	50	49		1	98	70-130	11/26/2019 1851

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37193-002

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	11/26/2019 1851
Trichlorofluoromethane	50	54		1	108	70-130	11/26/2019 1851
Vinyl chloride	50	44		1	88	70-130	11/26/2019 1851
Xylenes (total)	100	100		1	102	70-130	11/26/2019 1851
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		103	53-142				
Bromofluorobenzene		120	47-138				
Toluene-d8		118	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37193-003

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	97		1	97	7.2	60-140	20	11/26/2019 1929
Benzene	50	47		1	94	7.0	70-130	20	11/26/2019 1929
Bromodichloromethane	50	49		1	98	4.6	70-130	20	11/26/2019 1929
Bromoform	50	52		1	103	1.9	70-130	20	11/26/2019 1929
Bromomethane (Methyl bromide)	50	44		1	89	6.7	70-130	20	11/26/2019 1929
2-Butanone (MEK)	100	95		1	95	6.2	60-140	20	11/26/2019 1929
Carbon disulfide	50	43		1	87	11	70-130	20	11/26/2019 1929
Carbon tetrachloride	50	46		1	92	11	70-130	20	11/26/2019 1929
Chlorobenzene	50	48		1	96	4.6	70-130	20	11/26/2019 1929
Chloroethane	50	48		1	96	10	70-130	20	11/26/2019 1929
Chloroform	50	46		1	93	7.7	70-130	20	11/26/2019 1929
Chloromethane (Methyl chloride)	50	40		1	79	11	60-140	20	11/26/2019 1929
Cyclohexane	50	47		1	94	14	70-130	20	11/26/2019 1929
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	0.97	70-130	20	11/26/2019 1929
Dibromochloromethane	50	50		1	100	4.0	70-130	20	11/26/2019 1929
1,2-Dibromoethane (EDB)	50	49		1	98	4.2	70-130	20	11/26/2019 1929
1,2-Dichlorobenzene	50	50		1	99	1.7	70-130	20	11/26/2019 1929
1,3-Dichlorobenzene	50	50		1	99	2.2	70-130	20	11/26/2019 1929
1,4-Dichlorobenzene	50	49		1	99	2.9	70-130	20	11/26/2019 1929
Dichlorodifluoromethane	50	44		1	87	13	60-140	20	11/26/2019 1929
1,1-Dichloroethane	50	45		1	90	9.0	70-130	20	11/26/2019 1929
1,2-Dichloroethane	50	45		1	89	6.5	70-130	20	11/26/2019 1929
1,1-Dichloroethene	50	52		1	105	12	70-130	20	11/26/2019 1929
cis-1,2-Dichloroethene	50	46		1	92	9.0	70-130	20	11/26/2019 1929
trans-1,2-Dichloroethene	50	50		1	99	11	70-130	20	11/26/2019 1929
1,2-Dichloropropane	50	48		1	96	5.7	70-130	20	11/26/2019 1929
cis-1,3-Dichloropropene	50	51		1	102	4.4	70-130	20	11/26/2019 1929
trans-1,3-Dichloropropene	50	51		1	102	3.2	70-130	20	11/26/2019 1929
Ethylbenzene	50	48		1	96	7.2	70-130	20	11/26/2019 1929
2-Hexanone	100	98		1	98	1.8	70-130	20	11/26/2019 1929
Isopropylbenzene	50	48		1	96	5.2	70-130	20	11/26/2019 1929
Methyl acetate	50	46		1	91	3.0	70-130	20	11/26/2019 1929
Methyl tertiary butyl ether (MTBE)	50	46		1	92	4.6	70-130	20	11/26/2019 1929
4-Methyl-2-pentanone	100	91		1	91	3.2	70-130	20	11/26/2019 1929
Methylcyclohexane	50	49		1	98	11	70-130	20	11/26/2019 1929
Methylene chloride	50	45		1	89	7.3	70-130	20	11/26/2019 1929
Styrene	50	48		1	96	5.1	70-130	20	11/26/2019 1929
1,1,2,2-Tetrachloroethane	50	47		1	93	1.2	70-130	20	11/26/2019 1929
Tetrachloroethene	50	52		1	105	7.7	70-130	20	11/26/2019 1929
Toluene	50	48		1	96	6.5	70-130	20	11/26/2019 1929
1,1,2-Trichloro-1,1,2-Trifluoroethane	50	46		1	92	13	70-130	20	11/26/2019 1929
1,2,4-Trichlorobenzene	50	52		1	105	1.3	70-130	20	11/26/2019 1929
1,1,1-Trichloroethane	50	46		1	92	11	70-130	20	11/26/2019 1929
1,1,2-Trichloroethane	50	48		1	96	1.6	70-130	20	11/26/2019 1929

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37193-003

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	49		1	97	8.2	70-130	20	11/26/2019 1929
Trichlorofluoromethane	50	48		1	96	12	70-130	20	11/26/2019 1929
Vinyl chloride	50	40		1	80	10	70-130	20	11/26/2019 1929
Xylenes (total)	100	97		1	97	6.0	70-130	20	11/26/2019 1929
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		100	53-142						
Bromofluorobenzene		120	47-138						
Toluene-d8		119	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37197-001

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	11/26/2019 2053
Benzene	ND		1	5.0	ug/kg	11/26/2019 2053
Bromodichloromethane	ND		1	5.0	ug/kg	11/26/2019 2053
Bromoform	ND		1	5.0	ug/kg	11/26/2019 2053
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	11/26/2019 2053
2-Butanone (MEK)	ND		1	20	ug/kg	11/26/2019 2053
Carbon disulfide	ND		1	5.0	ug/kg	11/26/2019 2053
Carbon tetrachloride	ND		1	5.0	ug/kg	11/26/2019 2053
Chlorobenzene	ND		1	5.0	ug/kg	11/26/2019 2053
Chloroethane	ND		1	5.0	ug/kg	11/26/2019 2053
Chloroform	ND		1	5.0	ug/kg	11/26/2019 2053
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	11/26/2019 2053
Cyclohexane	ND		1	5.0	ug/kg	11/26/2019 2053
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	11/26/2019 2053
Dibromochloromethane	ND		1	5.0	ug/kg	11/26/2019 2053
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	11/26/2019 2053
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 2053
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 2053
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 2053
Dichlorodifluoromethane	ND		1	5.0	ug/kg	11/26/2019 2053
1,1-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 2053
1,2-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 2053
1,1-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 2053
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 2053
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 2053
1,2-Dichloropropane	ND		1	5.0	ug/kg	11/26/2019 2053
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 2053
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 2053
Ethylbenzene	ND		1	5.0	ug/kg	11/26/2019 2053
2-Hexanone	ND		1	10	ug/kg	11/26/2019 2053
Isopropylbenzene	ND		1	5.0	ug/kg	11/26/2019 2053
Methyl acetate	ND		1	5.0	ug/kg	11/26/2019 2053
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	11/26/2019 2053
4-Methyl-2-pentanone	ND		1	10	ug/kg	11/26/2019 2053
Methylcyclohexane	ND		1	5.0	ug/kg	11/26/2019 2053
Methylene chloride	ND		1	5.0	ug/kg	11/26/2019 2053
Styrene	ND		1	5.0	ug/kg	11/26/2019 2053
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	11/26/2019 2053
Tetrachloroethene	ND		1	5.0	ug/kg	11/26/2019 2053
Toluene	ND		1	5.0	ug/kg	11/26/2019 2053
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	11/26/2019 2053
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 2053
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 2053
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 2053

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37197-001

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	11/26/2019 2053
Trichlorofluoromethane	ND		1	5.0	ug/kg	11/26/2019 2053
Vinyl chloride	ND		1	5.0	ug/kg	11/26/2019 2053
Xylenes (total)	ND		1	10	ug/kg	11/26/2019 2053
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		94	53-142			
Bromofluorobenzene		98	47-138			
Toluene-d8		98	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37197-002

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	88		1	88	60-140	11/26/2019 2018
Benzene	50	46		1	92	70-130	11/26/2019 2018
Bromodichloromethane	50	49		1	99	70-130	11/26/2019 2018
Bromoform	50	52		1	104	70-130	11/26/2019 2018
Bromomethane (Methyl bromide)	50	45		1	91	70-130	11/26/2019 2018
2-Butanone (MEK)	100	87		1	87	60-140	11/26/2019 2018
Carbon disulfide	50	43		1	86	70-130	11/26/2019 2018
Carbon tetrachloride	50	46		1	93	70-130	11/26/2019 2018
Chlorobenzene	50	47		1	94	70-130	11/26/2019 2018
Chloroethane	50	47		1	95	70-130	11/26/2019 2018
Chloroform	50	48		1	95	70-130	11/26/2019 2018
Chloromethane (Methyl chloride)	50	43		1	86	60-140	11/26/2019 2018
Cyclohexane	50	48		1	96	70-130	11/26/2019 2018
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	97	70-130	11/26/2019 2018
Dibromochloromethane	50	51		1	102	70-130	11/26/2019 2018
1,2-Dibromoethane (EDB)	50	50		1	101	70-130	11/26/2019 2018
1,2-Dichlorobenzene	50	46		1	93	70-130	11/26/2019 2018
1,3-Dichlorobenzene	50	45		1	91	70-130	11/26/2019 2018
1,4-Dichlorobenzene	50	46		1	91	70-130	11/26/2019 2018
Dichlorodifluoromethane	50	42		1	84	60-140	11/26/2019 2018
1,1-Dichloroethane	50	46		1	93	70-130	11/26/2019 2018
1,2-Dichloroethane	50	47		1	95	70-130	11/26/2019 2018
1,1-Dichloroethene	50	51		1	102	70-130	11/26/2019 2018
cis-1,2-Dichloroethene	50	47		1	94	70-130	11/26/2019 2018
trans-1,2-Dichloroethene	50	49		1	98	70-130	11/26/2019 2018
1,2-Dichloropropane	50	48		1	97	70-130	11/26/2019 2018
cis-1,3-Dichloropropene	50	52		1	104	70-130	11/26/2019 2018
trans-1,3-Dichloropropene	50	52		1	104	70-130	11/26/2019 2018
Ethylbenzene	50	45		1	91	70-130	11/26/2019 2018
2-Hexanone	100	95		1	95	70-130	11/26/2019 2018
Isopropylbenzene	50	44		1	87	70-130	11/26/2019 2018
Methyl acetate	50	50		1	101	70-130	11/26/2019 2018
Methyl tertiary butyl ether (MTBE)	50	50		1	100	70-130	11/26/2019 2018
4-Methyl-2-pentanone	100	99		1	99	70-130	11/26/2019 2018
Methylcyclohexane	50	47		1	94	70-130	11/26/2019 2018
Methylene chloride	50	46		1	92	70-130	11/26/2019 2018
Styrene	50	48		1	96	70-130	11/26/2019 2018
1,1,2,2-Tetrachloroethane	50	49		1	98	70-130	11/26/2019 2018
Tetrachloroethene	50	44		1	88	70-130	11/26/2019 2018
Toluene	50	44		1	88	70-130	11/26/2019 2018
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	93	70-130	11/26/2019 2018
1,2,4-Trichlorobenzene	50	44		1	89	70-130	11/26/2019 2018
1,1,1-Trichloroethane	50	45		1	90	70-130	11/26/2019 2018
1,1,2-Trichloroethane	50	50		1	99	70-130	11/26/2019 2018

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37197-002

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	45		1	90	70-130	11/26/2019 2018
Trichlorofluoromethane	50	46		1	91	70-130	11/26/2019 2018
Vinyl chloride	50	41		1	82	70-130	11/26/2019 2018
Xylenes (total)	100	93		1	93	70-130	11/26/2019 2018
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		95	53-142				
Bromofluorobenzene		101	47-138				
Toluene-d8		102	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: UK22073-008MS

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	260	120	710	N	1	380	70-130	11/27/2019 0336
Benzene	ND	58	47		1	80	70-130	11/27/2019 0336
Bromodichloromethane	ND	58	44		1	75	70-130	11/27/2019 0336
Bromoform	ND	58	38	N	1	66	70-130	11/27/2019 0336
Bromomethane (Methyl bromide)	ND	58	42		1	72	70-130	11/27/2019 0336
2-Butanone (MEK)	ND	120	58	N	1	50	70-130	11/27/2019 0336
Carbon disulfide	ND	58	42		1	71	70-130	11/27/2019 0336
Carbon tetrachloride	ND	58	45		1	78	70-130	11/27/2019 0336
Chlorobenzene	ND	58	44		1	76	70-130	11/27/2019 0336
Chloroethane	ND	58	48		1	82	70-130	11/27/2019 0336
Chloroform	ND	58	48		1	82	70-130	11/27/2019 0336
Chloromethane (Methyl chloride)	ND	58	42		1	73	60-140	11/27/2019 0336
Cyclohexane	ND	58	46		1	79	70-130	11/27/2019 0336
1,2-Dibromo-3-chloropropane (DBCP)	ND	58	48		1	83	70-130	11/27/2019 0336
Dibromochloromethane	ND	58	47		1	81	70-130	11/27/2019 0336
1,2-Dibromoethane (EDB)	ND	58	49		1	84	70-130	11/27/2019 0336
1,2-Dichlorobenzene	ND	58	39	N	1	66	70-130	11/27/2019 0336
1,3-Dichlorobenzene	ND	58	42		1	72	70-130	11/27/2019 0336
1,4-Dichlorobenzene	ND	58	40	N	1	69	70-130	11/27/2019 0336
Dichlorodifluoromethane	ND	58	43		1	74	60-140	11/27/2019 0336
1,1-Dichloroethane	ND	58	48		1	83	70-130	11/27/2019 0336
1,2-Dichloroethane	ND	58	45		1	77	70-130	11/27/2019 0336
1,1-Dichloroethene	ND	58	55		1	93	70-130	11/27/2019 0336
cis-1,2-Dichloroethene	ND	58	48		1	81	70-130	11/27/2019 0336
trans-1,2-Dichloroethene	ND	58	51		1	87	70-130	11/27/2019 0336
1,2-Dichloropropane	ND	58	47		1	80	70-130	11/27/2019 0336
cis-1,3-Dichloropropene	ND	58	40	N	1	69	70-130	11/27/2019 0336
trans-1,3-Dichloropropene	ND	58	50		1	85	70-130	11/27/2019 0336
Ethylbenzene	ND	58	45		1	76	70-130	11/27/2019 0336
2-Hexanone	ND	120	75	N	1	65	70-130	11/27/2019 0336
Isopropylbenzene	ND	58	38	N	1	64	70-130	11/27/2019 0336
Methyl acetate	ND	58	70		1	120	70-130	11/27/2019 0336
Methyl tertiary butyl ether (MTBE)	ND	58	49		1	84	70-130	11/27/2019 0336
4-Methyl-2-pentanone	ND	120	80	N	1	69	70-130	11/27/2019 0336
Methylcyclohexane	ND	58	41	N	1	69	70-130	11/27/2019 0336
Methylene chloride	ND	58	50		1	85	70-130	11/27/2019 0336
Styrene	ND	58	34	N	1	58	70-130	11/27/2019 0336
1,1,2,2-Tetrachloroethane	ND	58	62		1	106	70-130	11/27/2019 0336
Tetrachloroethene	ND	58	48		1	81	70-130	11/27/2019 0336
Toluene	ND	58	50		1	86	70-130	11/27/2019 0336
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	58	49		1	84	70-130	11/27/2019 0336
1,2,4-Trichlorobenzene	ND	58	22	N	1	38	70-130	11/27/2019 0336
1,1,1-Trichloroethane	ND	58	46		1	78	70-130	11/27/2019 0336
1,1,2-Trichloroethane	ND	58	51		1	88	70-130	11/27/2019 0336

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: UK22073-008MS

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	58	44		1	75	70-130	11/27/2019 0336
Trichlorofluoromethane	ND	58	45		1	78	70-130	11/27/2019 0336
Vinyl chloride	ND	58	43		1	73	70-130	11/27/2019 0336
Xylenes (total)	ND	120	86		1	74	70-130	11/27/2019 0336
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		88	53-142					
Bromofluorobenzene		77	47-138					
Toluene-d8		119	68-124					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MSD

Sample ID: UK22073-008MD

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	260	94	420	N,+	1	165	51	70-130	20	11/27/2019 0359
Benzene	ND	47	37	+	1	78	23	70-130	20	11/27/2019 0359
Bromodichloromethane	ND	47	37		1	79	16	70-130	20	11/27/2019 0359
Bromoform	ND	47	35		1	74	9.7	70-130	20	11/27/2019 0359
Bromomethane (Methyl bromide)	ND	47	35		1	75	19	70-130	20	11/27/2019 0359
2-Butanone (MEK)	ND	94	44	N,+	1	47	27	70-130	20	11/27/2019 0359
Carbon disulfide	ND	47	34		1	73	19	70-130	20	11/27/2019 0359
Carbon tetrachloride	ND	47	37	+	1	79	21	70-130	20	11/27/2019 0359
Chlorobenzene	ND	47	35	+	1	75	22	70-130	20	11/27/2019 0359
Chloroethane	ND	47	39	+	1	83	22	70-130	20	11/27/2019 0359
Chloroform	ND	47	38	+	1	80	25	70-130	20	11/27/2019 0359
Chloromethane (Methyl chloride)	ND	47	34	+	1	73	21	60-140	20	11/27/2019 0359
Cyclohexane	ND	47	40		1	86	14	70-130	20	11/27/2019 0359
1,2-Dibromo-3-chloropropane (DBCP)	ND	47	34	+	1	74	33	70-130	20	11/27/2019 0359
Dibromochloromethane	ND	47	37	+	1	79	24	70-130	20	11/27/2019 0359
1,2-Dibromoethane (EDB)	ND	47	36	+	1	77	30	70-130	20	11/27/2019 0359
1,2-Dichlorobenzene	ND	47	33		1	71	15	70-130	20	11/27/2019 0359
1,3-Dichlorobenzene	ND	47	35		1	74	19	70-130	20	11/27/2019 0359
1,4-Dichlorobenzene	ND	47	34		1	72	18	70-130	20	11/27/2019 0359
Dichlorodifluoromethane	ND	47	34	+	1	72	24	60-140	20	11/27/2019 0359
1,1-Dichloroethane	ND	47	37	+	1	80	25	70-130	20	11/27/2019 0359
1,2-Dichloroethane	ND	47	36	+	1	76	23	70-130	20	11/27/2019 0359
1,1-Dichloroethene	ND	47	44	+	1	93	23	70-130	20	11/27/2019 0359
cis-1,2-Dichloroethene	ND	47	38	+	1	80	24	70-130	20	11/27/2019 0359
trans-1,2-Dichloroethene	ND	47	40	+	1	86	23	70-130	20	11/27/2019 0359
1,2-Dichloropropane	ND	47	38	+	1	80	22	70-130	20	11/27/2019 0359
cis-1,3-Dichloropropene	ND	47	38		1	80	6.7	70-130	20	11/27/2019 0359
trans-1,3-Dichloropropene	ND	47	38	+	1	82	25	70-130	20	11/27/2019 0359
Ethylbenzene	ND	47	37		1	78	19	70-130	20	11/27/2019 0359
2-Hexanone	ND	94	53	N,+	1	57	34	70-130	20	11/27/2019 0359
Isopropylbenzene	ND	47	35		1	75	7.1	70-130	20	11/27/2019 0359
Methyl acetate	ND	47	64	N	1	137	8.5	70-130	20	11/27/2019 0359
Methyl tertiary butyl ether (MTBE)	ND	47	38	+	1	80	26	70-130	20	11/27/2019 0359
4-Methyl-2-pentanone	ND	94	67		1	72	18	70-130	20	11/27/2019 0359
Methylcyclohexane	ND	47	40		1	85	2.0	70-130	20	11/27/2019 0359
Methylene chloride	ND	47	38	+	1	80	28	70-130	20	11/27/2019 0359
Styrene	ND	47	32	N	1	68	6.7	70-130	20	11/27/2019 0359
1,1,2,2-Tetrachloroethane	ND	47	40	+	1	84	44	70-130	20	11/27/2019 0359
Tetrachloroethene	ND	47	37	+	1	79	25	70-130	20	11/27/2019 0359
Toluene	ND	47	36	+	1	77	33	70-130	20	11/27/2019 0359
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	47	40		1	86	20	70-130	20	11/27/2019 0359
1,2,4-Trichlorobenzene	ND	47	22	N	1	47	0.70	70-130	20	11/27/2019 0359
1,1,1-Trichloroethane	ND	47	37	+	1	79	21	70-130	20	11/27/2019 0359
1,1,2-Trichloroethane	ND	47	37	+	1	80	31	70-130	20	11/27/2019 0359

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MSD

Sample ID: UK22073-008MD

Matrix: Solid

Batch: 37197

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	ND	47	36		1	77	19	70-130	20	11/27/2019 0359
Trichlorofluoromethane	ND	47	37		1	79	20	70-130	20	11/27/2019 0359
Vinyl chloride	ND	47	34	+	1	72	23	70-130	20	11/27/2019 0359
Xylenes (total)	ND	94	72		1	77	18	70-130	20	11/27/2019 0359
Surrogate	Q	% Rec	Acceptance Limit							
1,2-Dichloroethane-d4		89	53-142							
Bromofluorobenzene		92	47-138							
Toluene-d8		104	68-124							

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37558-001

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/02/2019 0938
Benzene	ND		1	5.0	ug/kg	12/02/2019 0938
Bromodichloromethane	ND		1	5.0	ug/kg	12/02/2019 0938
Bromoform	ND		1	5.0	ug/kg	12/02/2019 0938
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/02/2019 0938
2-Butanone (MEK)	ND		1	20	ug/kg	12/02/2019 0938
Carbon disulfide	ND		1	5.0	ug/kg	12/02/2019 0938
Carbon tetrachloride	ND		1	5.0	ug/kg	12/02/2019 0938
Chlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
Chloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
Chloroform	ND		1	5.0	ug/kg	12/02/2019 0938
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/02/2019 0938
Cyclohexane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/02/2019 0938
Dibromochloromethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/02/2019 0938
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/02/2019 0938
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/02/2019 0938
Ethylbenzene	ND		1	5.0	ug/kg	12/02/2019 0938
2-Hexanone	ND		1	10	ug/kg	12/02/2019 0938
Isopropylbenzene	ND		1	5.0	ug/kg	12/02/2019 0938
Methyl acetate	ND		1	5.0	ug/kg	12/02/2019 0938
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/02/2019 0938
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/02/2019 0938
Methylcyclohexane	ND		1	5.0	ug/kg	12/02/2019 0938
Methylene chloride	ND		1	5.0	ug/kg	12/02/2019 0938
Styrene	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
Tetrachloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
Toluene	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37558-001

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/02/2019 0938
Vinyl chloride	ND		1	5.0	ug/kg	12/02/2019 0938
Xylenes (total)	ND		1	10	ug/kg	12/02/2019 0938
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		91	53-142			
Bromofluorobenzene		102	47-138			
Toluene-d8		104	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Data for Lot Number: UK22073

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37558-002

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	112	60-140	12/02/2019 0915
Benzene	50	49		1	99	70-130	12/02/2019 0915
Bromodichloromethane	50	50		1	100	70-130	12/02/2019 0915
Bromoform	50	50		1	100	70-130	12/02/2019 0915
Bromomethane (Methyl bromide)	50	47		1	93	70-130	12/02/2019 0915
2-Butanone (MEK)	100	100		1	103	60-140	12/02/2019 0915
Carbon disulfide	50	49		1	99	70-130	12/02/2019 0915
Carbon tetrachloride	50	50		1	101	70-130	12/02/2019 0915
Chlorobenzene	50	49		1	98	70-130	12/02/2019 0915
Chloroethane	50	53		1	106	70-130	12/02/2019 0915
Chloroform	50	50		1	99	70-130	12/02/2019 0915
Chloromethane (Methyl chloride)	50	48		1	95	60-140	12/02/2019 0915
Cyclohexane	50	47		1	95	70-130	12/02/2019 0915
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	91	70-130	12/02/2019 0915
Dibromochloromethane	50	50		1	100	70-130	12/02/2019 0915
1,2-Dibromoethane (EDB)	50	48		1	97	70-130	12/02/2019 0915
1,2-Dichlorobenzene	50	48		1	97	70-130	12/02/2019 0915
1,3-Dichlorobenzene	50	49		1	98	70-130	12/02/2019 0915
1,4-Dichlorobenzene	50	48		1	97	70-130	12/02/2019 0915
Dichlorodifluoromethane	50	41		1	83	60-140	12/02/2019 0915
1,1-Dichloroethane	50	50		1	100	70-130	12/02/2019 0915
1,2-Dichloroethane	50	48		1	96	70-130	12/02/2019 0915
1,1-Dichloroethene	50	57		1	114	70-130	12/02/2019 0915
cis-1,2-Dichloroethene	50	50		1	100	70-130	12/02/2019 0915
trans-1,2-Dichloroethene	50	54		1	107	70-130	12/02/2019 0915
1,2-Dichloropropane	50	50		1	99	70-130	12/02/2019 0915
cis-1,3-Dichloropropene	50	53		1	106	70-130	12/02/2019 0915
trans-1,3-Dichloropropene	50	53		1	106	70-130	12/02/2019 0915
Ethylbenzene	50	50		1	101	70-130	12/02/2019 0915
2-Hexanone	100	110		1	110	70-130	12/02/2019 0915
Isopropylbenzene	50	49		1	98	70-130	12/02/2019 0915
Methyl acetate	50	48		1	96	70-130	12/02/2019 0915
Methyl tertiary butyl ether (MTBE)	50	48		1	97	70-130	12/02/2019 0915
4-Methyl-2-pentanone	100	95		1	95	70-130	12/02/2019 0915
Methylcyclohexane	50	48		1	96	70-130	12/02/2019 0915
Methylene chloride	50	47		1	93	70-130	12/02/2019 0915
Styrene	50	51		1	101	70-130	12/02/2019 0915
1,1,2,2-Tetrachloroethane	50	47		1	93	70-130	12/02/2019 0915
Tetrachloroethene	50	51		1	101	70-130	12/02/2019 0915
Toluene	50	48		1	96	70-130	12/02/2019 0915
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	12/02/2019 0915
1,2,4-Trichlorobenzene	50	48		1	95	70-130	12/02/2019 0915
1,1,1-Trichloroethane	50	50		1	100	70-130	12/02/2019 0915
1,1,2-Trichloroethane	50	49		1	97	70-130	12/02/2019 0915

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37558-002

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	101	70-130	12/02/2019 0915
Trichlorofluoromethane	50	48		1	96	70-130	12/02/2019 0915
Vinyl chloride	50	46		1	91	70-130	12/02/2019 0915
Xylenes (total)	100	100		1	101	70-130	12/02/2019 0915
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		89	53-142				
Bromofluorobenzene		101	47-138				
Toluene-d8		102	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37558-003

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	109	3.1	60-140	20	12/02/2019 1709
Benzene	50	50		1	99	0.11	70-130	20	12/02/2019 1709
Bromodichloromethane	50	50		1	101	0.64	70-130	20	12/02/2019 1709
Bromoform	50	51		1	102	1.5	70-130	20	12/02/2019 1709
Bromomethane (Methyl bromide)	50	53		1	107	14	70-130	20	12/02/2019 1709
2-Butanone (MEK)	100	100		1	103	0.11	60-140	20	12/02/2019 1709
Carbon disulfide	50	50		1	101	2.3	70-130	20	12/02/2019 1709
Carbon tetrachloride	50	52		1	104	3.0	70-130	20	12/02/2019 1709
Chlorobenzene	50	50		1	99	0.88	70-130	20	12/02/2019 1709
Chloroethane	50	56		1	112	5.6	70-130	20	12/02/2019 1709
Chloroform	50	52		1	103	3.9	70-130	20	12/02/2019 1709
Chloromethane (Methyl chloride)	50	50		1	100	4.6	60-140	20	12/02/2019 1709
Cyclohexane	50	46		1	92	2.7	70-130	20	12/02/2019 1709
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	91	0.57	70-130	20	12/02/2019 1709
Dibromochloromethane	50	50		1	100	0.056	70-130	20	12/02/2019 1709
1,2-Dibromoethane (EDB)	50	49		1	97	0.96	70-130	20	12/02/2019 1709
1,2-Dichlorobenzene	50	50		1	100	3.3	70-130	20	12/02/2019 1709
1,3-Dichlorobenzene	50	51		1	101	2.9	70-130	20	12/02/2019 1709
1,4-Dichlorobenzene	50	50		1	101	4.2	70-130	20	12/02/2019 1709
Dichlorodifluoromethane	50	43		1	86	3.9	60-140	20	12/02/2019 1709
1,1-Dichloroethane	50	51		1	103	2.6	70-130	20	12/02/2019 1709
1,2-Dichloroethane	50	47		1	93	2.3	70-130	20	12/02/2019 1709
1,1-Dichloroethene	50	58		1	117	2.4	70-130	20	12/02/2019 1709
cis-1,2-Dichloroethene	50	51		1	103	2.9	70-130	20	12/02/2019 1709
trans-1,2-Dichloroethene	50	56		1	113	5.0	70-130	20	12/02/2019 1709
1,2-Dichloropropane	50	51		1	101	1.9	70-130	20	12/02/2019 1709
cis-1,3-Dichloropropene	50	53		1	107	0.48	70-130	20	12/02/2019 1709
trans-1,3-Dichloropropene	50	52		1	104	1.4	70-130	20	12/02/2019 1709
Ethylbenzene	50	51		1	103	2.1	70-130	20	12/02/2019 1709
2-Hexanone	100	100		1	104	5.4	70-130	20	12/02/2019 1709
Isopropylbenzene	50	50		1	100	1.9	70-130	20	12/02/2019 1709
Methyl acetate	50	50		1	100	4.4	70-130	20	12/02/2019 1709
Methyl tertiary butyl ether (MTBE)	50	51		1	103	5.9	70-130	20	12/02/2019 1709
4-Methyl-2-pentanone	100	98		1	98	2.2	70-130	20	12/02/2019 1709
Methylcyclohexane	50	45		1	91	5.2	70-130	20	12/02/2019 1709
Methylene chloride	50	48		1	96	3.2	70-130	20	12/02/2019 1709
Styrene	50	51		1	102	0.42	70-130	20	12/02/2019 1709
1,1,2,2-Tetrachloroethane	50	48		1	96	3.3	70-130	20	12/02/2019 1709
Tetrachloroethene	50	51		1	103	1.2	70-130	20	12/02/2019 1709
Toluene	50	48		1	95	1.2	70-130	20	12/02/2019 1709
1,1,2-Trichloro-1,1,2-Trifluoroethane	50	45		1	89	3.4	70-130	20	12/02/2019 1709
1,2,4-Trichlorobenzene	50	51		1	102	6.3	70-130	20	12/02/2019 1709
1,1,1-Trichloroethane	50	52		1	103	3.1	70-130	20	12/02/2019 1709
1,1,2-Trichloroethane	50	49		1	97	0.12	70-130	20	12/02/2019 1709

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37558-003

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	50		1	100	0.41	70-130	20	12/02/2019 1709
Trichlorofluoromethane	50	49		1	99	3.3	70-130	20	12/02/2019 1709
Vinyl chloride	50	47		1	94	3.5	70-130	20	12/02/2019 1709
Xylenes (total)	100	100		1	102	0.55	70-130	20	12/02/2019 1709
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		88	53-142						
Bromofluorobenzene		98	47-138						
Toluene-d8		98	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

## Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ36920-001

Matrix: Solid

Batch: 36920

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/25/2019 1328

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acenaphthene	ND		1	13	ug/kg	11/29/2019 1059
Acenaphthylene	ND		1	13	ug/kg	11/29/2019 1059
Acetophenone	ND		1	67	ug/kg	11/29/2019 1059
Anthracene	ND		1	13	ug/kg	11/29/2019 1059
Atrazine	ND		1	67	ug/kg	11/29/2019 1059
Benzaldehyde	ND		1	67	ug/kg	11/29/2019 1059
Benzo(a)anthracene	ND		1	13	ug/kg	11/29/2019 1059
Benzo(a)pyrene	ND		1	13	ug/kg	11/29/2019 1059
Benzo(b)fluoranthene	ND		1	13	ug/kg	11/29/2019 1059
Benzo(g,h,i)perylene	ND		1	13	ug/kg	11/29/2019 1059
Benzo(k)fluoranthene	ND		1	13	ug/kg	11/29/2019 1059
1,1'-Biphenyl	ND		1	67	ug/kg	11/29/2019 1059
4-Bromophenyl phenyl ether	ND		1	67	ug/kg	11/29/2019 1059
Butyl benzyl phthalate	ND		1	67	ug/kg	11/29/2019 1059
Caprolactam	ND		1	67	ug/kg	11/29/2019 1059
Carbazole	ND		1	67	ug/kg	11/29/2019 1059
bis (2-Chloro-1-methylethyl) ether	ND		1	67	ug/kg	11/29/2019 1059
4-Chloro-3-methyl phenol	ND		1	67	ug/kg	11/29/2019 1059
4-Chloroaniline	ND		1	67	ug/kg	11/29/2019 1059
bis(2-Chloroethoxy)methane	ND		1	67	ug/kg	11/29/2019 1059
bis(2-Chloroethyl)ether	ND		1	67	ug/kg	11/29/2019 1059
2-Chloronaphthalene	ND		1	67	ug/kg	11/29/2019 1059
2-Chlorophenol	ND		1	67	ug/kg	11/29/2019 1059
4-Chlorophenyl phenyl ether	ND		1	67	ug/kg	11/29/2019 1059
Chrysene	ND		1	13	ug/kg	11/29/2019 1059
Dibenzo(a,h)anthracene	ND		1	13	ug/kg	11/29/2019 1059
Dibenzofuran	ND		1	67	ug/kg	11/29/2019 1059
3,3'-Dichlorobenzidine	ND		1	67	ug/kg	11/29/2019 1059
2,4-Dichlorophenol	ND		1	67	ug/kg	11/29/2019 1059
Diethylphthalate	ND		1	67	ug/kg	11/29/2019 1059
Dimethyl phthalate	ND		1	67	ug/kg	11/29/2019 1059
2,4-Dimethylphenol	ND		1	67	ug/kg	11/29/2019 1059
Di-n-butyl phthalate	ND		1	67	ug/kg	11/29/2019 1059
4,6-Dinitro-2-methylphenol	ND		1	330	ug/kg	11/29/2019 1059
2,4-Dinitrophenol	ND		1	330	ug/kg	11/29/2019 1059
2,4-Dinitrotoluene	ND		1	130	ug/kg	11/29/2019 1059
2,6-Dinitrotoluene	ND		1	130	ug/kg	11/29/2019 1059
Di-n-octylphthalate	ND		1	67	ug/kg	11/29/2019 1059
bis(2-Ethylhexyl)phthalate	ND		1	67	ug/kg	11/29/2019 1059
Fluoranthene	ND		1	13	ug/kg	11/29/2019 1059
Fluorene	ND		1	13	ug/kg	11/29/2019 1059
Hexachlorobenzene	ND		1	67	ug/kg	11/29/2019 1059
Hexachlorobutadiene	ND		1	67	ug/kg	11/29/2019 1059
Hexachlorocyclopentadiene	ND		1	330	ug/kg	11/29/2019 1059

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result &lt; LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ36920-001

Matrix: Solid

Batch: 36920

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/25/2019 1328

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Hexachloroethane	ND		1	67	ug/kg	11/29/2019 1059
Indeno(1,2,3-c,d)pyrene	ND		1	13	ug/kg	11/29/2019 1059
Isophorone	ND		1	67	ug/kg	11/29/2019 1059
2-Methylnaphthalene	ND		1	13	ug/kg	11/29/2019 1059
2-Methylphenol	ND		1	67	ug/kg	11/29/2019 1059
3+4-Methylphenol	ND		1	130	ug/kg	11/29/2019 1059
Naphthalene	ND		1	13	ug/kg	11/29/2019 1059
2-Nitroaniline	ND		1	130	ug/kg	11/29/2019 1059
3-Nitroaniline	ND		1	130	ug/kg	11/29/2019 1059
4-Nitroaniline	ND		1	130	ug/kg	11/29/2019 1059
Nitrobenzene	ND		1	67	ug/kg	11/29/2019 1059
2-Nitrophenol	ND		1	130	ug/kg	11/29/2019 1059
4-Nitrophenol	ND		1	330	ug/kg	11/29/2019 1059
N-Nitrosodi-n-propylamine	ND		1	67	ug/kg	11/29/2019 1059
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	ug/kg	11/29/2019 1059
Pentachlorophenol	ND		1	330	ug/kg	11/29/2019 1059
Phenanthrene	ND		1	13	ug/kg	11/29/2019 1059
Phenol	ND		1	67	ug/kg	11/29/2019 1059
Pyrene	ND		1	13	ug/kg	11/29/2019 1059
2,4,5-Trichlorophenol	ND		1	67	ug/kg	11/29/2019 1059
2,4,6-Trichlorophenol	ND		1	67	ug/kg	11/29/2019 1059

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		76	24-137
2-Fluorophenol		82	16-136
Nitrobenzene-d5		72	12-144
Phenol-d5		82	26-148
Terphenyl-d14		92	20-127
2,4,6-Tribromophenol		57	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ36920-002

Matrix: Solid

Batch: 36920

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/25/2019 1328

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	670	560		1	84	46-114	11/29/2019 1124
Acenaphthylene	670	560		1	84	44-122	11/29/2019 1124
Acetophenone	670	510		1	76	48-111	11/29/2019 1124
Anthracene	670	580		1	86	50-119	11/29/2019 1124
Atrazine	670	570		1	86	48-116	11/29/2019 1124
Benzaldehyde	670	490		1	74	10-110	11/29/2019 1124
Benzo(a)anthracene	670	560		1	85	47-121	11/29/2019 1124
Benzo(a)pyrene	670	580		1	87	55-134	11/29/2019 1124
Benzo(b)fluoranthene	670	550		1	83	28-139	11/29/2019 1124
Benzo(g,h,i)perylene	670	590		1	89	36-125	11/29/2019 1124
Benzo(k)fluoranthene	670	550		1	83	47-130	11/29/2019 1124
1,1'-Biphenyl	670	540		1	81	49-110	11/29/2019 1124
4-Bromophenyl phenyl ether	670	510		1	77	46-118	11/29/2019 1124
Butyl benzyl phthalate	670	720		1	108	46-128	11/29/2019 1124
Caprolactam	670	640		1	96	43-121	11/29/2019 1124
Carbazole	670	580		1	87	47-128	11/29/2019 1124
bis (2-Chloro-1-methylethyl) ether	670	450		1	67	31-102	11/29/2019 1124
4-Chloro-3-methyl phenol	670	620		1	93	49-118	11/29/2019 1124
4-Chloroaniline	670	430		1	65	17-106	11/29/2019 1124
bis(2-Chloroethoxy)methane	670	520		1	78	39-108	11/29/2019 1124
bis(2-Chloroethyl)ether	670	560		1	84	32-105	11/29/2019 1124
2-Chloronaphthalene	670	540		1	81	31-127	11/29/2019 1124
2-Chlorophenol	670	580		1	88	37-106	11/29/2019 1124
4-Chlorophenyl phenyl ether	670	560		1	83	47-116	11/29/2019 1124
Chrysene	670	560		1	84	45-126	11/29/2019 1124
Dibenzo(a,h)anthracene	670	570		1	85	45-122	11/29/2019 1124
Dibenzofuran	670	550		1	83	45-112	11/29/2019 1124
3,3'-Dichlorobenzidine	670	490		1	73	10-119	11/29/2019 1124
2,4-Dichlorophenol	670	550		1	83	41-113	11/29/2019 1124
Diethylphthalate	670	600		1	90	49-123	11/29/2019 1124
Dimethyl phthalate	670	570		1	85	48-120	11/29/2019 1124
2,4-Dimethylphenol	670	730		1	110	33-123	11/29/2019 1124
Di-n-butyl phthalate	670	610		1	92	51-129	11/29/2019 1124
4,6-Dinitro-2-methylphenol	670	560		1	83	40-130	11/29/2019 1124
2,4-Dinitrophenol	1300	1000		1	76	10-113	11/29/2019 1124
2,4-Dinitrotoluene	670	610		1	92	48-124	11/29/2019 1124
2,6-Dinitrotoluene	670	570		1	85	47-125	11/29/2019 1124
Di-n-octylphthalate	670	600		1	91	49-142	11/29/2019 1124
bis(2-Ethylhexyl)phthalate	670	620		1	93	45-128	11/29/2019 1124
Fluoranthene	670	540		1	82	50-123	11/29/2019 1124
Fluorene	670	570		1	85	48-117	11/29/2019 1124
Hexachlorobenzene	670	490		1	73	44-122	11/29/2019 1124
Hexachlorobutadiene	670	520		1	78	33-103	11/29/2019 1124
Hexachlorocyclopentadiene	3300	2600		1	77	18-121	11/29/2019 1124

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ36920-002

Matrix: Solid

Batch: 36920

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/25/2019 1328

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	670	520		1	77	30-96	11/29/2019 1124
Indeno(1,2,3-c,d)pyrene	670	580		1	87	45-123	11/29/2019 1124
Isophorone	670	580		1	86	41-113	11/29/2019 1124
2-Methylnaphthalene	670	540		1	80	40-106	11/29/2019 1124
2-Methylphenol	670	590		1	89	32-107	11/29/2019 1124
3+4-Methylphenol	670	610		1	91	39-108	11/29/2019 1124
Naphthalene	670	530		1	80	36-110	11/29/2019 1124
2-Nitroaniline	670	610		1	92	45-123	11/29/2019 1124
3-Nitroaniline	670	510		1	76	24-127	11/29/2019 1124
4-Nitroaniline	670	640		1	97	48-127	11/29/2019 1124
Nitrobenzene	670	540		1	81	33-114	11/29/2019 1124
2-Nitrophenol	670	530		1	80	35-108	11/29/2019 1124
4-Nitrophenol	1300	1100		1	82	18-154	11/29/2019 1124
N-Nitrosodi-n-propylamine	670	610		1	92	32-115	11/29/2019 1124
N-Nitrosodiphenylamine (Diphenylamine)	670	550		1	83	53-150	11/29/2019 1124
Pentachlorophenol	1300	1000		1	75	27-138	11/29/2019 1124
Phenanthrene	670	540		1	82	49-117	11/29/2019 1124
Phenol	670	590		1	88	36-108	11/29/2019 1124
Pyrene	670	580		1	87	47-119	11/29/2019 1124
2,4,5-Trichlorophenol	670	530		1	80	46-122	11/29/2019 1124
2,4,6-Trichlorophenol	670	550		1	83	38-115	11/29/2019 1124
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		78	24-137				
2-Fluorophenol		82	16-136				
Nitrobenzene-d5		79	12-144				
Phenol-d5		86	26-148				
Terphenyl-d14		90	20-127				
2,4,6-Tribromophenol		65	27-128				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

## Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37330-001

Matrix: Aqueous

Batch: 37330

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 11/27/2019 1752

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	ug/L	12/01/2019 1516
2,4,5-Trichlorophenol	ND		1	4.0	ug/L	12/01/2019 1516
2,4,6-Trichlorophenol	ND		1	4.0	ug/L	12/01/2019 1516
2,4-Dichlorophenol	ND		1	8.0	ug/L	12/01/2019 1516
2,4-Dimethylphenol	ND		1	4.0	ug/L	12/01/2019 1516
2,4-Dinitrophenol	ND		1	20	ug/L	12/01/2019 1516
2,4-Dinitrotoluene	ND		1	8.0	ug/L	12/01/2019 1516
2,6-Dinitrotoluene	ND		1	8.0	ug/L	12/01/2019 1516
2-Chloronaphthalene	ND		1	4.0	ug/L	12/01/2019 1516
2-Chlorophenol	ND		1	4.0	ug/L	12/01/2019 1516
2-Methylnaphthalene	ND		1	0.80	ug/L	12/01/2019 1516
2-Methylphenol	ND		1	4.0	ug/L	12/01/2019 1516
2-Nitroaniline	ND		1	8.0	ug/L	12/01/2019 1516
2-Nitrophenol	ND		1	4.0	ug/L	12/01/2019 1516
3,3'-Dichlorobenzidine	ND		1	4.0	ug/L	12/01/2019 1516
3+4-Methylphenol	ND		1	4.0	ug/L	12/01/2019 1516
3-Nitroaniline	ND		1	8.0	ug/L	12/01/2019 1516
4,6-Dinitro-2-methylphenol	ND		1	20	ug/L	12/01/2019 1516
4-Bromophenyl phenyl ether	ND		1	4.0	ug/L	12/01/2019 1516
4-Chloro-3-methyl phenol	ND		1	4.0	ug/L	12/01/2019 1516
4-Chloroaniline	ND		1	8.0	ug/L	12/01/2019 1516
4-Chlorophenyl phenyl ether	ND		1	4.0	ug/L	12/01/2019 1516
4-Nitroaniline	ND		1	8.0	ug/L	12/01/2019 1516
4-Nitrophenol	ND		1	20	ug/L	12/01/2019 1516
Acenaphthene	ND		1	0.80	ug/L	12/01/2019 1516
Acenaphthylene	ND		1	0.80	ug/L	12/01/2019 1516
Acetophenone	ND		1	4.0	ug/L	12/01/2019 1516
Anthracene	ND		1	0.80	ug/L	12/01/2019 1516
Atrazine	ND		1	4.0	ug/L	12/01/2019 1516
Benzaldehyde	ND		1	8.0	ug/L	12/01/2019 1516
Benzo(a)anthracene	ND		1	0.80	ug/L	12/01/2019 1516
Benzo(a)pyrene	ND		1	0.80	ug/L	12/01/2019 1516
Benzo(b)fluoranthene	ND		1	0.80	ug/L	12/01/2019 1516
Benzo(g,h,i)perylene	ND		1	0.80	ug/L	12/01/2019 1516
Benzo(k)fluoranthene	ND		1	0.80	ug/L	12/01/2019 1516
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	ug/L	12/01/2019 1516
bis(2-Chloroethoxy)methane	ND		1	4.0	ug/L	12/01/2019 1516
bis(2-Chloroethyl)ether	ND		1	4.0	ug/L	12/01/2019 1516
bis(2-Ethylhexyl)phthalate	ND		1	4.0	ug/L	12/01/2019 1516
Butyl benzyl phthalate	ND		1	4.0	ug/L	12/01/2019 1516
Caprolactam	ND		1	8.0	ug/L	12/01/2019 1516
Carbazole	ND		1	4.0	ug/L	12/01/2019 1516
Chrysene	ND		1	0.80	ug/L	12/01/2019 1516
Dibenzo(a,h)anthracene	ND		1	0.80	ug/L	12/01/2019 1516

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37330-001

Matrix: Aqueous

Batch: 37330

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 11/27/2019 1752

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Dibenzofuran	ND		1	4.0	ug/L	12/01/2019 1516
Diethylphthalate	ND		1	4.0	ug/L	12/01/2019 1516
Dimethyl phthalate	ND		1	4.0	ug/L	12/01/2019 1516
Di-n-butyl phthalate	ND		1	4.0	ug/L	12/01/2019 1516
Di-n-octylphthalate	ND		1	4.0	ug/L	12/01/2019 1516
Fluoranthene	ND		1	0.80	ug/L	12/01/2019 1516
Fluorene	ND		1	0.80	ug/L	12/01/2019 1516
Hexachlorobenzene	ND		1	4.0	ug/L	12/01/2019 1516
Hexachlorobutadiene	ND		1	4.0	ug/L	12/01/2019 1516
Hexachlorocyclopentadiene	ND		1	20	ug/L	12/01/2019 1516
Hexachloroethane	ND		1	4.0	ug/L	12/01/2019 1516
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	ug/L	12/01/2019 1516
Isophorone	ND		1	4.0	ug/L	12/01/2019 1516
Naphthalene	ND		1	0.80	ug/L	12/01/2019 1516
Nitrobenzene	ND		1	4.0	ug/L	12/01/2019 1516
N-Nitrosodi-n-propylamine	ND		1	4.0	ug/L	12/01/2019 1516
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	ug/L	12/01/2019 1516
Pentachlorophenol	ND		1	20	ug/L	12/01/2019 1516
Phenanthrene	ND		1	0.80	ug/L	12/01/2019 1516
Phenol	ND		1	4.0	ug/L	12/01/2019 1516
Pyrene	ND		1	0.80	ug/L	12/01/2019 1516

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		66	37-129
2-Fluorophenol		39	24-127
Nitrobenzene-d5		62	38-127
Phenol-d5		54	28-128
Terphenyl-d14		84	10-148
2,4,6-Tribromophenol		65	35-144

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37330-002

Matrix: Aqueous

Batch: 37330

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 11/27/2019 1752

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	30		1	75	30-130	12/01/2019 1540
2,4,5-Trichlorophenol	40	29		1	73	30-123	12/01/2019 1540
2,4,6-Trichlorophenol	40	31		1	76	30-130	12/01/2019 1540
2,4-Dichlorophenol	40	29		1	73	30-121	12/01/2019 1540
2,4-Dimethylphenol	40	29		1	73	20-125	12/01/2019 1540
2,4-Dinitrophenol	80	59		1	74	11-126	12/01/2019 1540
2,4-Dinitrotoluene	40	30		1	74	30-130	12/01/2019 1540
2,6-Dinitrotoluene	40	30		1	74	30-130	12/01/2019 1540
2-Chloronaphthalene	40	30		1	74	30-130	12/01/2019 1540
2-Chlorophenol	40	29		1	74	30-130	12/01/2019 1540
2-Methylnaphthalene	40	29		1	73	40-132	12/01/2019 1540
2-Methylphenol	40	32		1	80	30-130	12/01/2019 1540
2-Nitroaniline	40	29		1	74	30-130	12/01/2019 1540
2-Nitrophenol	40	31		1	78	30-130	12/01/2019 1540
3,3'-Dichlorobenzidine	40	26		1	66	10-126	12/01/2019 1540
3+4-Methylphenol	40	30		1	76	30-130	12/01/2019 1540
3-Nitroaniline	40	22		1	56	30-130	12/01/2019 1540
4,6-Dinitro-2-methylphenol	40	34		1	86	30-130	12/01/2019 1540
4-Bromophenyl phenyl ether	40	32		1	80	30-124	12/01/2019 1540
4-Chloro-3-methyl phenol	40	29		1	71	30-123	12/01/2019 1540
4-Chloroaniline	40	31		1	78	12-157	12/01/2019 1540
4-Chlorophenyl phenyl ether	40	31		1	77	30-121	12/01/2019 1540
4-Nitroaniline	40	27		1	68	30-135	12/01/2019 1540
4-Nitrophenol	80	47		1	59	30-130	12/01/2019 1540
Acenaphthene	40	29		1	72	30-122	12/01/2019 1540
Acenaphthylene	40	29		1	72	30-130	12/01/2019 1540
Acetophenone	40	30		1	75	30-130	12/01/2019 1540
Anthracene	40	29		1	72	30-123	12/01/2019 1540
Atrazine	40	30		1	75	30-130	12/01/2019 1540
Benzaldehyde	40	18		1	44	20-115	12/01/2019 1540
Benzo(a)anthracene	40	29		1	73	40-125	12/01/2019 1540
Benzo(a)pyrene	40	28		1	69	40-128	12/01/2019 1540
Benzo(b)fluoranthene	40	29		1	72	30-130	12/01/2019 1540
Benzo(g,h,i)perylene	40	32		1	79	30-130	12/01/2019 1540
Benzo(k)fluoranthene	40	29		1	73	30-130	12/01/2019 1540
bis (2-Chloro-1-methylethyl) ether	40	32		1	80	30-130	12/01/2019 1540
bis(2-Chloroethoxy)methane	40	31		1	77	30-130	12/01/2019 1540
bis(2-Chloroethyl)ether	40	31		1	78	30-130	12/01/2019 1540
bis(2-Ethylhexyl)phthalate	40	26		1	64	30-130	12/01/2019 1540
Butyl benzyl phthalate	40	26		1	66	30-130	12/01/2019 1540
Caprolactam	40	31		1	77	30-130	12/01/2019 1540
Carbazole	40	29		1	73	30-130	12/01/2019 1540
Chrysene	40	29		1	73	30-130	12/01/2019 1540
Dibenzo(a,h)anthracene	40	31		1	77	30-130	12/01/2019 1540

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37330-002

Matrix: Aqueous

Batch: 37330

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 11/27/2019 1752

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	28		1	71	30-118	12/01/2019 1540
Diethylphthalate	40	29		1	72	40-125	12/01/2019 1540
Dimethyl phthalate	40	29		1	73	40-127	12/01/2019 1540
Di-n-butyl phthalate	40	29		1	72	40-127	12/01/2019 1540
Di-n-octylphthalate	40	24		1	59	30-130	12/01/2019 1540
Fluoranthene	40	31		1	77	40-128	12/01/2019 1540
Fluorene	40	29		1	72	30-124	12/01/2019 1540
Hexachlorobenzene	40	31		1	77	30-125	12/01/2019 1540
Hexachlorobutadiene	40	30		1	75	24-110	12/01/2019 1540
Hexachlorocyclopentadiene	200	130		1	66	22-122	12/01/2019 1540
Hexachloroethane	40	28		1	70	30-130	12/01/2019 1540
Indeno(1,2,3-c,d)pyrene	40	30		1	75	30-130	12/01/2019 1540
Isophorone	40	31		1	77	30-130	12/01/2019 1540
Naphthalene	40	30		1	74	30-130	12/01/2019 1540
Nitrobenzene	40	30		1	75	30-130	12/01/2019 1540
N-Nitrosodi-n-propylamine	40	30		1	76	30-130	12/01/2019 1540
N-Nitrosodiphenylamine (Diphenylamine)	40	30		1	74	30-123	12/01/2019 1540
Pentachlorophenol	80	61		1	76	30-130	12/01/2019 1540
Phenanthrene	40	29		1	73	40-123	12/01/2019 1540
Phenol	40	30		1	76	30-130	12/01/2019 1540
Pyrene	40	30		1	75	40-126	12/01/2019 1540
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		73	37-129				
2-Fluorophenol		67	24-127				
Nitrobenzene-d5		71	38-127				
Phenol-d5		72	28-128				
Terphenyl-d14		85	10-148				
2,4,6-Tribromophenol		73	35-144				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

## Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37405-001

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acenaphthene	ND		1	13	ug/kg	11/30/2019 1642
Acenaphthylene	ND		1	13	ug/kg	11/30/2019 1642
Acetophenone	ND		1	67	ug/kg	11/30/2019 1642
Anthracene	ND		1	13	ug/kg	11/30/2019 1642
Atrazine	ND		1	67	ug/kg	11/30/2019 1642
Benzaldehyde	ND		1	67	ug/kg	11/30/2019 1642
Benzo(a)anthracene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(a)pyrene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(b)fluoranthene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(g,h,i)perylene	ND		1	13	ug/kg	11/30/2019 1642
Benzo(k)fluoranthene	ND		1	13	ug/kg	11/30/2019 1642
1,1'-Biphenyl	ND		1	67	ug/kg	11/30/2019 1642
4-Bromophenyl phenyl ether	ND		1	67	ug/kg	11/30/2019 1642
Butyl benzyl phthalate	ND		1	67	ug/kg	11/30/2019 1642
Caprolactam	ND		1	67	ug/kg	11/30/2019 1642
Carbazole	ND		1	67	ug/kg	11/30/2019 1642
bis (2-Chloro-1-methylethyl) ether	ND		1	67	ug/kg	11/30/2019 1642
4-Chloro-3-methyl phenol	ND		1	67	ug/kg	11/30/2019 1642
4-Chloroaniline	ND		1	67	ug/kg	11/30/2019 1642
bis(2-Chloroethoxy)methane	ND		1	67	ug/kg	11/30/2019 1642
bis(2-Chloroethyl)ether	ND		1	67	ug/kg	11/30/2019 1642
2-Chloronaphthalene	ND		1	67	ug/kg	11/30/2019 1642
2-Chlorophenol	ND		1	67	ug/kg	11/30/2019 1642
4-Chlorophenyl phenyl ether	ND		1	67	ug/kg	11/30/2019 1642
Chrysene	ND		1	13	ug/kg	11/30/2019 1642
Dibenzo(a,h)anthracene	ND		1	13	ug/kg	11/30/2019 1642
Dibenzofuran	ND		1	67	ug/kg	11/30/2019 1642
3,3'-Dichlorobenzidine	ND		1	67	ug/kg	11/30/2019 1642
2,4-Dichlorophenol	ND		1	67	ug/kg	11/30/2019 1642
Diethylphthalate	ND		1	67	ug/kg	11/30/2019 1642
Dimethyl phthalate	ND		1	67	ug/kg	11/30/2019 1642
2,4-Dimethylphenol	ND		1	67	ug/kg	11/30/2019 1642
Di-n-butyl phthalate	ND		1	67	ug/kg	11/30/2019 1642
4,6-Dinitro-2-methylphenol	ND		1	330	ug/kg	11/30/2019 1642
2,4-Dinitrophenol	ND		1	330	ug/kg	11/30/2019 1642
2,4-Dinitrotoluene	ND		1	130	ug/kg	11/30/2019 1642
2,6-Dinitrotoluene	ND		1	130	ug/kg	11/30/2019 1642
Di-n-octylphthalate	ND		1	67	ug/kg	11/30/2019 1642
bis(2-Ethylhexyl)phthalate	ND		1	67	ug/kg	11/30/2019 1642
Fluoranthene	ND		1	13	ug/kg	11/30/2019 1642
Fluorene	ND		1	13	ug/kg	11/30/2019 1642
Hexachlorobenzene	ND		1	67	ug/kg	11/30/2019 1642
Hexachlorobutadiene	ND		1	67	ug/kg	11/30/2019 1642
Hexachlorocyclopentadiene	ND		1	330	ug/kg	11/30/2019 1642

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37405-001

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Hexachloroethane	ND		1	67	ug/kg	11/30/2019 1642
Indeno(1,2,3-c,d)pyrene	ND		1	13	ug/kg	11/30/2019 1642
Isophorone	ND		1	67	ug/kg	11/30/2019 1642
2-Methylnaphthalene	ND		1	13	ug/kg	11/30/2019 1642
2-Methylphenol	ND		1	67	ug/kg	11/30/2019 1642
3+4-Methylphenol	ND		1	130	ug/kg	11/30/2019 1642
Naphthalene	ND		1	13	ug/kg	11/30/2019 1642
2-Nitroaniline	ND		1	130	ug/kg	11/30/2019 1642
3-Nitroaniline	ND		1	130	ug/kg	11/30/2019 1642
4-Nitroaniline	ND		1	130	ug/kg	11/30/2019 1642
Nitrobenzene	ND		1	67	ug/kg	11/30/2019 1642
2-Nitrophenol	ND		1	130	ug/kg	11/30/2019 1642
4-Nitrophenol	ND		1	330	ug/kg	11/30/2019 1642
N-Nitrosodi-n-propylamine	ND		1	67	ug/kg	11/30/2019 1642
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	ug/kg	11/30/2019 1642
Pentachlorophenol	ND		1	330	ug/kg	11/30/2019 1642
Phenanthrene	ND		1	13	ug/kg	11/30/2019 1642
Phenol	ND		1	67	ug/kg	11/30/2019 1642
Pyrene	ND		1	13	ug/kg	11/30/2019 1642
2,4,5-Trichlorophenol	ND		1	67	ug/kg	11/30/2019 1642
2,4,6-Trichlorophenol	ND		1	67	ug/kg	11/30/2019 1642

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		69	24-137
2-Fluorophenol		68	16-136
Nitrobenzene-d5		68	12-144
Phenol-d5		76	26-148
Terphenyl-d14		84	20-127
2,4,6-Tribromophenol		52	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37405-002

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	670	490		1	73	46-114	11/30/2019 1707
Acenaphthylene	670	490		1	74	44-122	11/30/2019 1707
Acetophenone	670	450		1	67	48-111	11/30/2019 1707
Anthracene	670	500		1	75	50-119	11/30/2019 1707
Atrazine	670	490		1	73	48-116	11/30/2019 1707
Benzaldehyde	670	400		1	60	10-110	11/30/2019 1707
Benzo(a)anthracene	670	490		1	73	47-121	11/30/2019 1707
Benzo(a)pyrene	670	520		1	79	55-134	11/30/2019 1707
Benzo(b)fluoranthene	670	490		1	74	28-139	11/30/2019 1707
Benzo(g,h,i)perylene	670	520		1	77	36-125	11/30/2019 1707
Benzo(k)fluoranthene	670	500		1	75	47-130	11/30/2019 1707
1,1'-Biphenyl	670	470		1	71	49-110	11/30/2019 1707
4-Bromophenyl phenyl ether	670	420		1	63	46-118	11/30/2019 1707
Butyl benzyl phthalate	670	650		1	98	46-128	11/30/2019 1707
Caprolactam	670	560		1	85	43-121	11/30/2019 1707
Carbazole	670	500		1	75	47-128	11/30/2019 1707
bis (2-Chloro-1-methylethyl) ether	670	350		1	52	31-102	11/30/2019 1707
4-Chloro-3-methyl phenol	670	570		1	85	49-118	11/30/2019 1707
4-Chloroaniline	670	390		1	58	17-106	11/30/2019 1707
bis(2-Chloroethoxy)methane	670	460		1	68	39-108	11/30/2019 1707
bis(2-Chloroethyl)ether	670	490		1	74	32-105	11/30/2019 1707
2-Chloronaphthalene	670	470		1	70	31-127	11/30/2019 1707
2-Chlorophenol	670	500		1	75	37-106	11/30/2019 1707
4-Chlorophenyl phenyl ether	670	470		1	71	47-116	11/30/2019 1707
Chrysene	670	490		1	73	45-126	11/30/2019 1707
Dibenzo(a,h)anthracene	670	520		1	78	45-122	11/30/2019 1707
Dibenzofuran	670	480		1	73	45-112	11/30/2019 1707
3,3'-Dichlorobenzidine	670	430		1	64	10-119	11/30/2019 1707
2,4-Dichlorophenol	670	490		1	73	41-113	11/30/2019 1707
Diethylphthalate	670	550		1	82	49-123	11/30/2019 1707
Dimethyl phthalate	670	510		1	76	48-120	11/30/2019 1707
2,4-Dimethylphenol	670	650		1	98	33-123	11/30/2019 1707
Di-n-butyl phthalate	670	540		1	81	51-129	11/30/2019 1707
4,6-Dinitro-2-methylphenol	670	470		1	71	40-130	11/30/2019 1707
2,4-Dinitrophenol	1300	890		1	67	10-113	11/30/2019 1707
2,4-Dinitrotoluene	670	540		1	81	48-124	11/30/2019 1707
2,6-Dinitrotoluene	670	510		1	76	47-125	11/30/2019 1707
Di-n-octylphthalate	670	580		1	87	49-142	11/30/2019 1707
bis(2-Ethylhexyl)phthalate	670	550		1	83	45-128	11/30/2019 1707
Fluoranthene	670	470		1	70	50-123	11/30/2019 1707
Fluorene	670	500		1	76	48-117	11/30/2019 1707
Hexachlorobenzene	670	400		1	60	44-122	11/30/2019 1707
Hexachlorobutadiene	670	440		1	65	33-103	11/30/2019 1707
Hexachlorocyclopentadiene	3300	2300		1	69	18-121	11/30/2019 1707

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37405-002

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	670	460		1	69	30-96	11/30/2019 1707
Indeno(1,2,3-c,d)pyrene	670	520		1	78	45-123	11/30/2019 1707
Isophorone	670	500		1	75	41-113	11/30/2019 1707
2-Methylnaphthalene	670	470		1	70	40-106	11/30/2019 1707
2-Methylphenol	670	500		1	75	32-107	11/30/2019 1707
3+4-Methylphenol	670	530		1	80	39-108	11/30/2019 1707
Naphthalene	670	480		1	73	36-110	11/30/2019 1707
2-Nitroaniline	670	540		1	81	45-123	11/30/2019 1707
3-Nitroaniline	670	480		1	71	24-127	11/30/2019 1707
4-Nitroaniline	670	580		1	87	48-127	11/30/2019 1707
Nitrobenzene	670	480		1	72	33-114	11/30/2019 1707
2-Nitrophenol	670	460		1	70	35-108	11/30/2019 1707
4-Nitrophenol	1300	1500		1	109	18-154	11/30/2019 1707
N-Nitrosodi-n-propylamine	670	540		1	81	32-115	11/30/2019 1707
N-Nitrosodiphenylamine (Diphenylamine)	670	490		1	73	53-150	11/30/2019 1707
Pentachlorophenol	1300	820		1	61	27-138	11/30/2019 1707
Phenanthrene	670	480		1	73	49-117	11/30/2019 1707
Phenol	670	520		1	78	36-108	11/30/2019 1707
Pyrene	670	520		1	77	47-119	11/30/2019 1707
2,4,5-Trichlorophenol	670	470		1	71	46-122	11/30/2019 1707
2,4,6-Trichlorophenol	670	470		1	70	38-115	11/30/2019 1707

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		68	24-137
2-Fluorophenol		72	16-136
Nitrobenzene-d5		66	12-144
Phenol-d5		75	26-148
Terphenyl-d14		80	20-127
2,4,6-Tribromophenol		55	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: UK22073-008MS

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	650	340		5	52	46-114	12/01/2019 0340
Acenaphthylene	ND	650	350		5	54	44-122	12/01/2019 0340
Acetophenone	ND	650	380		5	58	48-111	12/01/2019 0340
Anthracene	ND	650	330		5	51	50-119	12/01/2019 0340
Atrazine	ND	650	350		5	54	48-116	12/01/2019 0340
Benzaldehyde	ND	650	390		5	61	10-110	12/01/2019 0340
Benzo(a)anthracene	ND	650	360		5	56	47-121	12/01/2019 0340
Benzo(a)pyrene	ND	650	400		5	62	55-134	12/01/2019 0340
Benzo(b)fluoranthene	ND	650	490		5	76	28-139	12/01/2019 0340
Benzo(g,h,i)perylene	ND	650	140	N	5	21	36-125	12/01/2019 0340
Benzo(k)fluoranthene	ND	650	450		5	69	47-130	12/01/2019 0340
1,1'-Biphenyl	ND	650	340		5	53	49-110	12/01/2019 0340
4-Bromophenyl phenyl ether	ND	650	310		5	48	46-118	12/01/2019 0340
Butyl benzyl phthalate	ND	650	520		5	81	46-128	12/01/2019 0340
Caprolactam	ND	650	340		5	52	43-121	12/01/2019 0340
Carbazole	ND	650	360		5	55	47-128	12/01/2019 0340
bis (2-Chloro-1-methylethyl) ether	ND	650	250		5	38	31-102	12/01/2019 0340
4-Chloro-3-methyl phenol	ND	650	390		5	61	49-118	12/01/2019 0340
4-Chloroaniline	ND	650	150		5	23	17-106	12/01/2019 0340
bis(2-Chloroethoxy)methane	ND	650	360		5	56	39-108	12/01/2019 0340
bis(2-Chloroethyl)ether	ND	650	300		5	46	32-105	12/01/2019 0340
2-Chloronaphthalene	ND	650	340		5	53	31-127	12/01/2019 0340
2-Chlorophenol	ND	650	350		5	54	37-106	12/01/2019 0340
4-Chlorophenyl phenyl ether	ND	650	320		5	50	47-116	12/01/2019 0340
Chrysene	ND	650	330		5	51	45-126	12/01/2019 0340
Dibenzo(a,h)anthracene	ND	650	180	N	5	27	45-122	12/01/2019 0340
Dibenzofuran	ND	650	360		5	56	45-112	12/01/2019 0340
3,3'-Dichlorobenzidine	ND	650	ND	N	5	0.00	10-119	12/01/2019 0340
2,4-Dichlorophenol	ND	650	340		5	52	41-113	12/01/2019 0340
Diethylphthalate	ND	650	370		5	58	49-123	12/01/2019 0340
Dimethyl phthalate	ND	650	380		5	59	48-120	12/01/2019 0340
2,4-Dimethylphenol	ND	650	470		5	73	33-123	12/01/2019 0340
Di-n-butyl phthalate	ND	650	400		5	62	51-129	12/01/2019 0340
4,6-Dinitro-2-methylphenol	ND	650	430		5	66	40-130	12/01/2019 0340
2,4-Dinitrophenol	ND	1300	970		5	75	45-127	12/01/2019 0340
2,4-Dinitrotoluene	ND	650	290	N	5	46	48-124	12/01/2019 0340
2,6-Dinitrotoluene	ND	650	330		5	51	47-125	12/01/2019 0340
Di-n-octylphthalate	ND	650	970	N	5	151	49-142	12/01/2019 0340
bis(2-Ethylhexyl)phthalate	ND	650	560		5	86	45-128	12/01/2019 0340
Fluoranthene	ND	650	330		5	52	50-123	12/01/2019 0340
Fluorene	ND	650	340		5	53	48-117	12/01/2019 0340
Hexachlorobenzene	ND	650	270	N	5	42	44-122	12/01/2019 0340
Hexachlorobutadiene	ND	650	320		5	49	33-103	12/01/2019 0340
Hexachlorocyclopentadiene	ND	3200	77	N	5	2.4	18-121	12/01/2019 0340

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: UK22073-008MS

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	ND	650	200		5	30	30-96	12/01/2019 0340
Indeno(1,2,3-c,d)pyrene	ND	650	170	N	5	26	45-123	12/01/2019 0340
Isophorone	ND	650	380		5	58	41-113	12/01/2019 0340
2-Methylnaphthalene	ND	650	350		5	54	40-106	12/01/2019 0340
2-Methylphenol	ND	650	390		5	60	32-107	12/01/2019 0340
3+4-Methylphenol	ND	650	370		5	58	39-108	12/01/2019 0340
Naphthalene	ND	650	340		5	53	36-110	12/01/2019 0340
2-Nitroaniline	ND	650	300		5	46	45-123	12/01/2019 0340
3-Nitroaniline	ND	650	ND	N	5	0.00	24-127	12/01/2019 0340
4-Nitroaniline	ND	650	56	N	5	8.7	48-127	12/01/2019 0340
Nitrobenzene	ND	650	360		5	56	33-114	12/01/2019 0340
2-Nitrophenol	ND	650	310		5	47	35-108	12/01/2019 0340
4-Nitrophenol	ND	1300	800		5	62	18-154	12/01/2019 0340
N-Nitrosodi-n-propylamine	ND	650	390		5	61	32-115	12/01/2019 0340
N-Nitrosodiphenylamine (Diphenylamine)	ND	650	300	N	5	46	53-150	12/01/2019 0340
Pentachlorophenol	ND	1300	1200		5	92	27-138	12/01/2019 0340
Phenanthrene	ND	650	330		5	52	49-117	12/01/2019 0340
Phenol	ND	650	350		5	54	36-108	12/01/2019 0340
Pyrene	ND	650	370		5	57	47-119	12/01/2019 0340
2,4,5-Trichlorophenol	ND	650	300		5	46	46-122	12/01/2019 0340
2,4,6-Trichlorophenol	ND	650	330		5	52	38-115	12/01/2019 0340
Surrogate	Q	% Rec	Acceptance Limit					
2-Fluorobiphenyl		51	24-137					
2-Fluorophenol		48	16-136					
Nitrobenzene-d5		50	12-144					
Phenol-d5		52	26-148					
Terphenyl-d14		57	20-127					
2,4,6-Tribromophenol		87	27-128					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: UK22073-008MD

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	650	370		5	57	9.9	46-114	30	12/01/2019 0405
Acenaphthylene	ND	650	390		5	60	13	44-122	30	12/01/2019 0405
Acetophenone	ND	650	420		5	64	11	48-111	40	12/01/2019 0405
Anthracene	ND	650	360		5	56	10	50-119	30	12/01/2019 0405
Atrazine	ND	650	380		5	58	8.1	48-116	40	12/01/2019 0405
Benzaldehyde	ND	650	420		5	64	6.4	10-110	40	12/01/2019 0405
Benzo(a)anthracene	ND	650	400		5	61	11	47-121	30	12/01/2019 0405
Benzo(a)pyrene	ND	650	430		5	66	7.9	55-134	30	12/01/2019 0405
Benzo(b)fluoranthene	ND	650	520		5	79	5.4	28-139	30	12/01/2019 0405
Benzo(g,h,i)perylene	ND	650	150	N	5	23	8.5	36-125	30	12/01/2019 0405
Benzo(k)fluoranthene	ND	650	490		5	76	9.9	47-130	30	12/01/2019 0405
1,1'-Biphenyl	ND	650	380		5	58	9.5	49-110	40	12/01/2019 0405
4-Bromophenyl phenyl ether	ND	650	330		5	50	5.4	46-118	40	12/01/2019 0405
Butyl benzyl phthalate	ND	650	590		5	90	11	46-128	40	12/01/2019 0405
Caprolactam	ND	650	390		5	59	14	43-121	40	12/01/2019 0405
Carbazole	ND	650	390		5	59	8.5	47-128	40	12/01/2019 0405
bis (2-Chloro-1-methylethyl) ether	ND	650	290		5	44	14	31-102	40	12/01/2019 0405
4-Chloro-3-methyl phenol	ND	650	430		5	67	9.6	49-118	40	12/01/2019 0405
4-Chloroaniline	ND	650	170		5	26	14	17-106	40	12/01/2019 0405
bis(2-Chloroethoxy)methane	ND	650	380		5	58	4.8	39-108	40	12/01/2019 0405
bis(2-Chloroethyl)ether	ND	650	340		5	51	11	32-105	40	12/01/2019 0405
2-Chloronaphthalene	ND	650	380		5	59	12	31-127	40	12/01/2019 0405
2-Chlorophenol	ND	650	390		5	60	11	37-106	40	12/01/2019 0405
4-Chlorophenyl phenyl ether	ND	650	370		5	57	15	47-116	40	12/01/2019 0405
Chrysene	ND	650	370		5	56	10	45-126	30	12/01/2019 0405
Dibenzo(a,h)anthracene	ND	650	190	N	5	30	9.4	45-122	30	12/01/2019 0405
Dibenzofuran	ND	650	410		5	63	13	45-112	40	12/01/2019 0405
3,3'-Dichlorobenzidine	ND	650	ND	N	5	0.00	0.00	10-119	40	12/01/2019 0405
2,4-Dichlorophenol	ND	650	370		5	57	9.4	41-113	40	12/01/2019 0405
Diethylphthalate	ND	650	420		5	65	13	49-123	40	12/01/2019 0405
Dimethyl phthalate	ND	650	410		5	63	7.9	48-120	40	12/01/2019 0405
2,4-Dimethylphenol	ND	650	530		5	81	11	33-123	40	12/01/2019 0405
Di-n-butyl phthalate	ND	650	440		5	68	10	51-129	40	12/01/2019 0405
4,6-Dinitro-2-methylphenol	ND	650	440		5	68	3.5	40-130	40	12/01/2019 0405
2,4-Dinitrophenol	ND	1300	1000		5	78	5.0	45-127	40	12/01/2019 0405
2,4-Dinitrotoluene	ND	650	330		5	51	12	48-124	40	12/01/2019 0405
2,6-Dinitrotoluene	ND	650	410		5	63	22	47-125	40	12/01/2019 0405
Di-n-octylphthalate	ND	650	1100	N	5	164	9.3	49-142	40	12/01/2019 0405
bis(2-Ethylhexyl)phthalate	ND	650	610		5	93	9.1	45-128	40	12/01/2019 0405
Fluoranthene	ND	650	370		5	56	8.9	50-123	30	12/01/2019 0405
Fluorene	ND	650	380		5	59	13	48-117	30	12/01/2019 0405
Hexachlorobenzene	ND	650	300		5	45	9.4	44-122	40	12/01/2019 0405
Hexachlorobutadiene	ND	650	350		5	54	10	33-103	40	12/01/2019 0405
Hexachlorocyclopentadiene	ND	3300	51	N,+	5	1.6	41	18-121	40	12/01/2019 0405

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: UK22073-008MD

Matrix: Solid

Batch: 37405

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1156

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Hexachloroethane	ND	650	230		5	35	16	30-96	40	12/01/2019 0405
Indeno(1,2,3-c,d)pyrene	ND	650	180	N	5	28	8.8	45-123	30	12/01/2019 0405
Isophorone	ND	650	410		5	63	8.5	41-113	40	12/01/2019 0405
2-Methylnaphthalene	ND	650	380		5	58	8.8	40-106	30	12/01/2019 0405
2-Methylphenol	ND	650	480		5	73	20	32-107	40	12/01/2019 0405
3+4-Methylphenol	ND	650	440		5	68	17	39-108	40	12/01/2019 0405
Naphthalene	ND	650	380		5	59	11	36-110	30	12/01/2019 0405
2-Nitroaniline	ND	650	320		5	49	8.4	45-123	40	12/01/2019 0405
3-Nitroaniline	ND	650	ND	N	5	0.00	0.00	24-127	40	12/01/2019 0405
4-Nitroaniline	ND	650	67	N	5	10	17	48-127	40	12/01/2019 0405
Nitrobenzene	ND	650	400		5	61	11	33-114	40	12/01/2019 0405
2-Nitrophenol	ND	650	330		5	51	7.9	35-108	40	12/01/2019 0405
4-Nitrophenol	ND	1300	1100		5	80	26	18-154	40	12/01/2019 0405
N-Nitrosodi-n-propylamine	ND	650	450		5	68	13	32-115	40	12/01/2019 0405
N-Nitrosodiphenylamine (Diphenylamine)	ND	650	330	N	5	50	9.6	53-150	40	12/01/2019 0405
Pentachlorophenol	ND	1300	1300		5	99	8.9	27-138	40	12/01/2019 0405
Phenanthrene	ND	650	370		5	57	12	49-117	30	12/01/2019 0405
Phenol	ND	650	390		5	60	12	36-108	40	12/01/2019 0405
Pyrene	ND	650	390		5	59	4.2	47-119	30	12/01/2019 0405
2,4,5-Trichlorophenol	ND	650	330		5	51	11	46-122	40	12/01/2019 0405
2,4,6-Trichlorophenol	ND	650	370		5	57	12	38-115	40	12/01/2019 0405
Surrogate	Q	% Rec	Acceptance Limit							
2-Fluorobiphenyl		54	24-137							
2-Fluorophenol		52	16-136							
Nitrobenzene-d5		60	12-144							
Phenol-d5		59	26-148							
Terphenyl-d14		64	20-127							
2,4,6-Tribromophenol		93	27-128							

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody  
and  
Miscellaneous Documents





**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 101669**

Client: <u>WESTINGHOUSE</u>		Report to Contact: <u>DIANA JOYNOT</u>		Telephone No. / E-mail: <u>803 647 1920</u>	Quote No.:
Address: <u>5801 BULFORD RD</u>		Sampler's Signature: <u>[Signature]</u>		Analysis (Attach list if more space is needed): <u>TOXIC METALS</u>	
City: <u>Hopkins</u> State: <u>SC</u> Zip Code:		Printer Name: <u>JAMES LEIGHTON</u>		Page <u>1</u> of <u>2</u>	
Project Name: <u>RF Implementation</u>		Project No.:		Barcode:	
Project No. <u>60545649</u>		Sample ID / Description		QRM: <u>UK22073</u>	
(Containers for each sample may be combined in one line.)		Date		Remarks / Container I.D.:	
<u>SED-35 0'-6"</u>	<u>11-22-19</u>	<u>0840</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-35 6'-12"</u>		<u>0845</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-36 0'-6"</u>		<u>1000</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-36 6'-12"</u>		<u>1005</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-37 0'-6"</u>		<u>1120</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-37 6'-12"</u>		<u>1125</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-40 0'-6"</u>		<u>1220</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-40.ms 0'-6"</u>		<u>1220</u>	<u>G</u>	<u>X</u>	<u>X</u>
<u>SED-40.ms 6'-12"</u>		<u>1220</u>	<u>G</u>	<u>X</u>	<u>X</u>

Turn Around Time Required (Prior lab approval required for expedited TAT):		Sample Disposal:	
<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Rush (Specify)	<input type="checkbox"/> Return to Client	<input checked="" type="checkbox"/> Disposed by Lab
Relinquished by: <u>[Signature]</u>		Date: <u>11-22-19</u> Time: <u>1647</u>	
Relinquished by:		Date: _____ Time: _____	
Relinquished by:		Date: _____ Time: _____	
Relinquished by:		Date: _____ Time: _____	

Possible Hazard Identification:		DC Requirements (Specify):	
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison
1. Received by:		Date:	Time:
2. Received by:		Date:	Time:
3. Received by:		Date:	Time:
4. Laboratory received by: <u>Darby Nugent</u>		Date: <u>11/21/19</u>	Time: <u>1647</u>
LAB USE ONLY		Receipt Temp: <u>3.8</u> °C	<u>to ✓</u>
Received on Ice (Circle):		Yes	No

Note: All samples are retained for four weeks from receipt unless other arrangements are made.



**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**

101668

Client: <u>Westinghouse</u>		Telephone No. / E-mail: <u>803 647 1720</u>		Quote No.
Address: <u>5801 BUFF RD</u>		Sampler's Signature: <u>[Signature]</u>		Page: <u>2 of 2</u>
City: <u>Hopkiss</u> State: <u>SC</u> Zip Code:		Analysis (Attach list if more space is needed)		
Project Name: <u>RI Implementation</u>		Printed Name: <u>Janae Leaphart</u>		
Project No. <u>60595649</u>	PO No.	Matrix		
Sample ID / Description (Conditions for each sample may be contained on one site.)	Date	Time	No. of Containers by Preservative Type	
SED-38 0:00	11-22-19	1450	SED 1 ACW 1 SW 1	
SED-39 0:00		1520	SED 1 ACW 1 SW 1	
EB-01-112219		1320	SED 3 ACW 3 SW 3	
TB-01-112219			SED 2 ACW 2 SW 2	
Turn Around Time Required (Prior lab approval required for expedited TAT.) <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)				
1. Relinquished by <u>[Signature]</u>	Date: <u>11-22-19</u>	Time: <u>1647</u>	Possible Hazard Identification <input checked="" type="checkbox"/> Acid-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> SVH Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
2. Relinquished by	Date:	Time:	1. Received by	
3. Relinquished by	Date:	Time:	2. Received by	
4. Relinquished by	Date:	Time:	3. Received by	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.			4. Laboratory received by <u>Barley Nugent</u> Date <u>11/28/19</u> Time <u>1047</u>	
			LAB USE ONLY Returned on Ice (Circle) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ice Pack Receipt Term. <u>3 d</u>	

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: ME0018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: DMS / 11/22/19 Lot #: UK22073

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>19-2044</u>	
<u>3.8 / 3.8</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Boules 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>22261</u>
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # <u>NA</u> . Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Sample(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is <i>no</i> ) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: <u>NA</u> .	
SR barcode labels applied by: <u>BMG</u> Date: <u>11/22/19</u>	

Comments:

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# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

### Westinghouse Electric Company

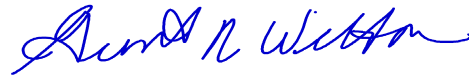
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: RI Implementation

Project Number: 60595649

Lot Number: **UK25040**

Date Completed: 12/05/2019



12/06/2019 11:12 AM

Approved and released by:  
Project Manager: Grant Wilton



The electronic signature above is the equivalent of a handwritten signature.  
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Shealy Environmental Services, Inc.  
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 [www.shealylab.com](http://www.shealylab.com)

# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## **Case Narrative Westinghouse Electric Company Lot Number: UK25040**

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

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: UK25040  
Project Name: RI Implementation  
Project Number: 60595649

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-41 0"-6"	Solid	11/25/2019 0830	11/25/2019
002	SED-42 0"-6"	Solid	11/25/2019 0835	11/25/2019
003	SED-44 0"-6"	Solid	11/25/2019 1150	11/25/2019
004	SED-43 0"-6"	Solid	11/25/2019 1220	11/25/2019
005	SED-46 0"-6"	Solid	11/25/2019 1450	11/25/2019
006	SED-45 0"-6"	Solid	11/25/2019 1525	11/25/2019
007	TB-01-112519	Aqueous	11/25/2019	11/25/2019

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(7 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary  
Westinghouse Electric Company  
Lot Number: UK25040  
Project Name: RI Implementation  
Project Number: 60595649

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-41 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.63		mg/kg	6
001	SED-41 0"-6"	Solid	Acetone	8260B	96		ug/kg	7
001	SED-41 0"-6"	Solid	Benzo(a)anthracene	8270D	19		ug/kg	9
001	SED-41 0"-6"	Solid	Benzo(a)pyrene	8270D	21		ug/kg	9
001	SED-41 0"-6"	Solid	Benzo(b)fluoranthene	8270D	28		ug/kg	9
001	SED-41 0"-6"	Solid	Chrysene	8270D	17		ug/kg	9
001	SED-41 0"-6"	Solid	Fluoranthene	8270D	28		ug/kg	9
001	SED-41 0"-6"	Solid	Pyrene	8270D	27		ug/kg	10
002	SED-42 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.83		mg/kg	11
002	SED-42 0"-6"	Solid	Acetone	8260B	59		ug/kg	12
003	SED-44 0"-6"	Solid	Acetone	8260B	57		ug/kg	17
004	SED-43 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.50		mg/kg	21
004	SED-43 0"-6"	Solid	Acetone	8260B	79		ug/kg	22
005	SED-46 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.62		mg/kg	26
005	SED-46 0"-6"	Solid	Acetone	8260B	110		ug/kg	27
006	SED-45 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.82		mg/kg	31
006	SED-45 0"-6"	Solid	Acetone	8260B	130		ug/kg	32
006	SED-45 0"-6"	Solid	2-Butanone (MEK)	8260B	29		ug/kg	32
006	SED-45 0"-6"	Solid	Benzaldehyde	8270D	76		ug/kg	34

(19 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK25040-001
Description: SED-41 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0830	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649
	% Solids: 32.6 11/26/2019 0114

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1917	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.63		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

Shealy Environmental Services, Inc.  
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-001
Description: SED-41 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0830	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 32.6 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1144	JM1		37558	3.84

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	96		26	ug/kg	2
Benzene	71-43-2	8260B	ND		6.5	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.5	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.5	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.5	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		26	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.5	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.5	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.5	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.5	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.5	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.5	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.5	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.5	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.5	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.5	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.5	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.5	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.5	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.5	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.5	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.5	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.5	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.5	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.5	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.5	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.5	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.5	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.5	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.5	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.5	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.5	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.5	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.5	ug/kg	2
Styrene	100-42-5	8260B	ND		6.5	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.5	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.5	ug/kg	2
Toluene	108-88-3	8260B	ND		6.5	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.5	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.5	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.5	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.5	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-001
Description: SED-41 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0830	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649
	% Solids: 32.6 11/26/2019 0114

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1144	JM1		37558	3.84

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.5	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.5	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.5	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		89	53-142
Bromofluorobenzene		84	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-001
Description: SED-41 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0830	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 32.6 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1518	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	19		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	21		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	28		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	17		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		330	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		330	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	28		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		330	ug/kg	1

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-001
Description: SED-41 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0830	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 32.6 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1518	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		330	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		330	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	27		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		61	24-137
2-Fluorophenol		63	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		67	26-148
Terphenyl-d14		68	20-127
2,4,6-Tribromophenol		66	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK25040-002
Description: SED-42 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0835	% Solids: 18.4 11/26/2019 0114
Date Received: 11/25/2019	Project Name: RI Implementation
	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1938	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.83		0.50	mg/kg	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-002
Description: SED-42 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0835	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 18.4 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/27/2019 0032	ALR1		37193	3.67

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	59		27	ug/kg	1
Benzene	71-43-2	8260B	ND		6.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		27	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		14	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.8	ug/kg	1
Styrene	100-42-5	8260B	ND		6.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.8	ug/kg	1
Toluene	108-88-3	8260B	ND		6.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.8	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-002
Description: SED-42 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0835	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 18.4 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/27/2019 0032	ALR1		37193	3.67

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		14	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		108	53-142
Bromofluorobenzene		88	47-138
Toluene-d8		117	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-002
Description: SED-42 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0835	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 18.4 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1542	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-002
Description: SED-42 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 0835	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 18.4 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1542	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		64	24-137
2-Fluorophenol		67	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		70	26-148
Terphenyl-d14		68	20-127
2,4,6-Tribromophenol		69	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK25040-003
Description: SED-44 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1150	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649
	% Solids: 26.9 11/26/2019 0114

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 1959	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-003
Description: SED-44 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1150	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 26.9 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/27/2019 0055	ALR1		37193	3.49

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	57		29	ug/kg	1
Benzene	71-43-2	8260B	ND		7.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		7.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		7.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		7.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		29	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		7.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		7.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		7.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		7.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		7.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		7.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		7.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		7.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		7.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		7.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		7.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		7.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		7.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		7.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		7.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		7.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		7.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		7.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		7.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		7.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		7.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		7.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		7.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		14	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		7.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		7.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		7.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		7.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		7.2	ug/kg	1
Styrene	100-42-5	8260B	ND		7.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		7.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		7.2	ug/kg	1
Toluene	108-88-3	8260B	ND		7.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		7.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		7.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		7.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		7.2	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-003
Description: SED-44 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1150	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649
	% Solids: 26.9 11/26/2019 0114

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/27/2019 0055	ALR1		37193	3.49

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		7.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		7.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		7.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		14	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		107	53-142
Bromofluorobenzene		92	47-138
Toluene-d8		117	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-003
Description: SED-44 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1150	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 26.9 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1607	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		66	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		66	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		66	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		66	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		66	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		66	ug/kg	1
Caprolactam	105-60-2	8270D	ND		66	ug/kg	1
Carbazole	86-74-8	8270D	ND		66	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		66	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		66	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		66	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		66	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		66	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		66	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		66	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		66	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		66	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		66	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		66	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		66	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		66	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		66	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		66	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		66	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		66	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		66	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		66	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-003
Description: SED-44 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1150	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 26.9 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1607	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		66	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		66	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		66	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		66	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		66	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		66	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		66	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		66	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		66	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		56	24-137
2-Fluorophenol		56	16-136
Nitrobenzene-d5		57	12-144
Phenol-d5		56	26-148
Terphenyl-d14		60	20-127
2,4,6-Tribromophenol		62	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK25040-004
Description: SED-43 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1220	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649
	% Solids: 17.5 11/26/2019 0114

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 2020	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.50		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-004
Description: SED-43 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1220	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 17.5 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1251	JM1		37558	3.46

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	79		29	ug/kg	2
Benzene	71-43-2	8260B	ND		7.2	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		7.2	ug/kg	2
Bromoform	75-25-2	8260B	ND		7.2	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		7.2	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		29	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		7.2	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		7.2	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		7.2	ug/kg	2
Chloroethane	75-00-3	8260B	ND		7.2	ug/kg	2
Chloroform	67-66-3	8260B	ND		7.2	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		7.2	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		7.2	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		7.2	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		7.2	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		7.2	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		7.2	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		7.2	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		7.2	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		7.2	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		7.2	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		7.2	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		7.2	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		7.2	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		7.2	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		7.2	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		7.2	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		7.2	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		7.2	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		14	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		7.2	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		7.2	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		7.2	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		14	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		7.2	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		7.2	ug/kg	2
Styrene	100-42-5	8260B	ND		7.2	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		7.2	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		7.2	ug/kg	2
Toluene	108-88-3	8260B	ND		7.2	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		7.2	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		7.2	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		7.2	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		7.2	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-004
Description: SED-43 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1220	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 17.5 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1251	JM1		37558	3.46

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		7.2	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		7.2	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		7.2	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		14	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	53-142
Bromofluorobenzene		80	47-138
Toluene-d8		115	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-004
Description: SED-43 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1220	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 17.5 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1631	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		63	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		63	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		63	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		63	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		63	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		63	ug/kg	1
Caprolactam	105-60-2	8270D	ND		63	ug/kg	1
Carbazole	86-74-8	8270D	ND		63	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		63	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		63	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		63	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		63	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		63	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		63	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		63	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		63	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		63	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		63	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		63	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		63	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		63	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		63	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		63	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		310	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		310	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		120	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		120	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		63	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		63	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		63	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		63	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		310	ug/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-004
Description: SED-43 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1220	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 17.5 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1631	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		63	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		63	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		63	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		120	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		120	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		120	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		120	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		63	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		120	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		310	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		63	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		63	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		310	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		63	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		63	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		63	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		62	24-137
2-Fluorophenol		65	16-136
Nitrobenzene-d5		63	12-144
Phenol-d5		67	26-148
Terphenyl-d14		69	20-127
2,4,6-Tribromophenol		71	27-128

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK25040-005
Description: SED-46 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1450	% Solids: 34.5 11/26/2019 0114
Date Received: 11/25/2019	Project Name: RI Implementation
	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/03/2019 2041	GMH		37869

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.62		0.50	mg/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-005
Description: SED-46 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1450	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 34.5 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1314	JM1		37558	3.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	110		26	ug/kg	2
Benzene	71-43-2	8260B	ND		6.5	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		6.5	ug/kg	2
Bromoform	75-25-2	8260B	ND		6.5	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.5	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		26	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		6.5	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		6.5	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		6.5	ug/kg	2
Chloroethane	75-00-3	8260B	ND		6.5	ug/kg	2
Chloroform	67-66-3	8260B	ND		6.5	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.5	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		6.5	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.5	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		6.5	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.5	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.5	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.5	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.5	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		6.5	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		6.5	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		6.5	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		6.5	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.5	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.5	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		6.5	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.5	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.5	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		6.5	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		6.5	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		6.5	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.5	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		6.5	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		6.5	ug/kg	2
Styrene	100-42-5	8260B	ND		6.5	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.5	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		6.5	ug/kg	2
Toluene	108-88-3	8260B	ND		6.5	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.5	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.5	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.5	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.5	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-005
Description: SED-46 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1450	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649
	% Solids: 34.5 11/26/2019 0114

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/02/2019 1314	JM1		37558	3.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.5	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		6.5	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		6.5	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		83	47-138
Toluene-d8		113	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-005
Description: SED-46 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1450	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 34.5 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1656	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		64	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		64	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		64	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		64	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		64	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		64	ug/kg	1
Caprolactam	105-60-2	8270D	ND		64	ug/kg	1
Carbazole	86-74-8	8270D	ND		64	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		64	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		64	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		64	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		64	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		64	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		64	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		64	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		64	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		64	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		64	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		64	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		64	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		64	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		64	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		64	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		64	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		64	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		64	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		64	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-005
Description: SED-46 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1450	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 34.5 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1656	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		64	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		64	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		64	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		64	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		64	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		64	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		64	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		64	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		64	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		54	24-137
2-Fluorophenol		47	16-136
Nitrobenzene-d5		54	12-144
Phenol-d5		46	26-148
Terphenyl-d14		61	20-127
2,4,6-Tribromophenol		61	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UK25040-006
Description: SED-45 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1525	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649
% Solids: 34.7 11/26/2019 0114	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/04/2019 1601	GMH		38070

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.82		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-006
Description: SED-45 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1525	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 34.7 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/27/2019 0206	ALR1		37193	4.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	130		25	ug/kg	1
Benzene	71-43-2	8260B	ND		6.1	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.1	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	29		25	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.1	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.1	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.1	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.1	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.1	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.1	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.1	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		12	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.1	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		12	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.1	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.1	ug/kg	1
Styrene	100-42-5	8260B	ND		6.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.1	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.1	ug/kg	1
Toluene	108-88-3	8260B	ND		6.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.1	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-006
Description: SED-45 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1525	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 34.7 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	11/27/2019 0206	ALR1		37193	4.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.1	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.1	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		110	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		117	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-006
Description: SED-45 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1525	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 34.7 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1720	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		13	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		13	ug/kg	1
Acetophenone	98-86-2	8270D	ND		65	ug/kg	1
Anthracene	120-12-7	8270D	ND		13	ug/kg	1
Atrazine	1912-24-9	8270D	ND		65	ug/kg	1
Benzaldehyde	100-52-7	8270D	76		65	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		13	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		13	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		13	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		13	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		13	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		65	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		65	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		65	ug/kg	1
Caprolactam	105-60-2	8270D	ND		65	ug/kg	1
Carbazole	86-74-8	8270D	ND		65	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		65	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		65	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		65	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		65	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		65	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		65	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		65	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		65	ug/kg	1
Chrysene	218-01-9	8270D	ND		13	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		13	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		65	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		65	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		65	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		65	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		65	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		65	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		65	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		320	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		320	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		130	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		130	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		65	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		65	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		13	ug/kg	1
Fluorene	86-73-7	8270D	ND		13	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		65	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		65	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		320	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-006
Description: SED-45 0"-6"	Matrix: Solid
Date Sampled: 11/25/2019 1525	Project Name: RI Implementation
Date Received: 11/25/2019	% Solids: 34.7 11/26/2019 0114
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	1	12/02/2019 1720	JCG	11/29/2019 1329	37407

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		65	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		13	ug/kg	1
Isophorone	78-59-1	8270D	ND		65	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		13	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		65	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		130	ug/kg	1
Naphthalene	91-20-3	8270D	ND		13	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		130	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		130	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		130	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		65	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		130	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		320	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		65	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		65	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		320	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		13	ug/kg	1
Phenol	108-95-2	8270D	ND		65	ug/kg	1
Pyrene	129-00-0	8270D	ND		13	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		65	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		65	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		60	24-137
2-Fluorophenol		56	16-136
Nitrobenzene-d5		58	12-144
Phenol-d5		46	26-148
Terphenyl-d14		67	20-127
2,4,6-Tribromophenol		65	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-007
Description: TB-01-112519	Matrix: Aqueous
Date Sampled: 11/25/2019	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/26/2019 1200	TML		37119

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UK25040-007
Description: TB-01-112519	Matrix: Aqueous
Date Sampled: 11/25/2019	Project Name: RI Implementation
Date Received: 11/25/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	11/26/2019 1200	TML		37119

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		92	70-130
Bromofluorobenzene		98	70-130
Toluene-d8		96	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## QC Summary



# Inorganic non-metals - MB

Sample ID: UQ37869-001

Matrix: Solid

Batch: 37869

Analytical Method: 9056A

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N (soluble)	ND		1	0.50	mg/kg	12/03/2019 1028

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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QC Data for Lot Number: UK25040

# Inorganic non-metals - LCS

Sample ID: UQ37869-002

Matrix: Solid

Batch: 37869

Analytical Method: 9056A

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	0.80	0.78		1	98	80-120	12/03/2019 1051

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MB

Sample ID: UQ38070-001

Matrix: Solid

Batch: 38070

Analytical Method: 9056A

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N (soluble)	ND		1	0.50	mg/kg	12/04/2019 1516

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

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QC Data for Lot Number: UK25040

# Inorganic non-metals - LCS

Sample ID: UQ38070-002

Matrix: Solid

Batch: 38070

Analytical Method: 9056A

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	0.80	0.82		1	102	80-120	12/04/2019 1540

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37119-001

Matrix: Aqueous

Batch: 37119

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	11/26/2019 1055
Benzene	ND		1	1.0	ug/L	11/26/2019 1055
Bromodichloromethane	ND		1	1.0	ug/L	11/26/2019 1055
Bromoform	ND		1	1.0	ug/L	11/26/2019 1055
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	11/26/2019 1055
2-Butanone (MEK)	ND		1	10	ug/L	11/26/2019 1055
Carbon disulfide	ND		1	1.0	ug/L	11/26/2019 1055
Carbon tetrachloride	ND		1	1.0	ug/L	11/26/2019 1055
Chlorobenzene	ND		1	1.0	ug/L	11/26/2019 1055
Chloroethane	ND		1	2.0	ug/L	11/26/2019 1055
Chloroform	ND		1	1.0	ug/L	11/26/2019 1055
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	11/26/2019 1055
Cyclohexane	ND		1	1.0	ug/L	11/26/2019 1055
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	11/26/2019 1055
Dibromochloromethane	ND		1	1.0	ug/L	11/26/2019 1055
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	11/26/2019 1055
1,2-Dichlorobenzene	ND		1	1.0	ug/L	11/26/2019 1055
1,3-Dichlorobenzene	ND		1	1.0	ug/L	11/26/2019 1055
1,4-Dichlorobenzene	ND		1	1.0	ug/L	11/26/2019 1055
Dichlorodifluoromethane	ND		1	2.0	ug/L	11/26/2019 1055
1,1-Dichloroethane	ND		1	1.0	ug/L	11/26/2019 1055
1,2-Dichloroethane	ND		1	1.0	ug/L	11/26/2019 1055
1,1-Dichloroethene	ND		1	1.0	ug/L	11/26/2019 1055
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	11/26/2019 1055
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	11/26/2019 1055
1,2-Dichloropropane	ND		1	1.0	ug/L	11/26/2019 1055
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	11/26/2019 1055
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	11/26/2019 1055
Ethylbenzene	ND		1	1.0	ug/L	11/26/2019 1055
2-Hexanone	ND		1	10	ug/L	11/26/2019 1055
Isopropylbenzene	ND		1	1.0	ug/L	11/26/2019 1055
Methyl acetate	ND		1	1.0	ug/L	11/26/2019 1055
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	11/26/2019 1055
4-Methyl-2-pentanone	ND		1	10	ug/L	11/26/2019 1055
Methylcyclohexane	ND		1	5.0	ug/L	11/26/2019 1055
Methylene chloride	ND		1	1.0	ug/L	11/26/2019 1055
Styrene	ND		1	1.0	ug/L	11/26/2019 1055
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	11/26/2019 1055
Tetrachloroethene	ND		1	1.0	ug/L	11/26/2019 1055
Toluene	ND		1	1.0	ug/L	11/26/2019 1055
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	11/26/2019 1055
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	11/26/2019 1055
1,1,1-Trichloroethane	ND		1	1.0	ug/L	11/26/2019 1055
1,1,2-Trichloroethane	ND		1	1.0	ug/L	11/26/2019 1055

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37119-001

Matrix: Aqueous

Batch: 37119

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	11/26/2019 1055
Trichlorofluoromethane	ND		1	1.0	ug/L	11/26/2019 1055
Vinyl chloride	ND		1	1.0	ug/L	11/26/2019 1055
Xylenes (total)	ND		1	1.0	ug/L	11/26/2019 1055
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		92	70-130			
Bromofluorobenzene		98	70-130			
Toluene-d8		97	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37119-002

Matrix: Aqueous

Batch: 37119

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	78		1	78	60-140	11/26/2019 1007
Benzene	50	45		1	89	70-130	11/26/2019 1007
Bromodichloromethane	50	48		1	95	70-130	11/26/2019 1007
Bromoform	50	42		1	85	70-130	11/26/2019 1007
Bromomethane (Methyl bromide)	50	44		1	88	70-130	11/26/2019 1007
2-Butanone (MEK)	100	93		1	93	70-130	11/26/2019 1007
Carbon disulfide	50	43		1	86	70-130	11/26/2019 1007
Carbon tetrachloride	50	44		1	89	70-130	11/26/2019 1007
Chlorobenzene	50	44		1	89	70-130	11/26/2019 1007
Chloroethane	50	47		1	94	70-130	11/26/2019 1007
Chloroform	50	44		1	88	70-130	11/26/2019 1007
Chloromethane (Methyl chloride)	50	43		1	86	60-140	11/26/2019 1007
Cyclohexane	50	45		1	90	70-130	11/26/2019 1007
1,2-Dibromo-3-chloropropane (DBCP)	50	44		1	89	70-130	11/26/2019 1007
Dibromochloromethane	50	49		1	98	70-130	11/26/2019 1007
1,2-Dibromoethane (EDB)	50	46		1	93	70-130	11/26/2019 1007
1,2-Dichlorobenzene	50	45		1	90	70-130	11/26/2019 1007
1,3-Dichlorobenzene	50	45		1	90	70-130	11/26/2019 1007
1,4-Dichlorobenzene	50	43		1	87	70-130	11/26/2019 1007
Dichlorodifluoromethane	50	50		1	99	60-140	11/26/2019 1007
1,1-Dichloroethane	50	44		1	88	70-130	11/26/2019 1007
1,2-Dichloroethane	50	42		1	85	70-130	11/26/2019 1007
1,1-Dichloroethene	50	50		1	99	70-130	11/26/2019 1007
cis-1,2-Dichloroethene	50	43		1	87	70-130	11/26/2019 1007
trans-1,2-Dichloroethene	50	46		1	92	70-130	11/26/2019 1007
1,2-Dichloropropane	50	47		1	93	70-130	11/26/2019 1007
cis-1,3-Dichloropropene	50	51		1	102	70-130	11/26/2019 1007
trans-1,3-Dichloropropene	50	50		1	100	70-130	11/26/2019 1007
Ethylbenzene	50	46		1	93	70-130	11/26/2019 1007
2-Hexanone	100	97		1	97	70-130	11/26/2019 1007
Isopropylbenzene	50	48		1	95	70-130	11/26/2019 1007
Methyl acetate	50	44		1	88	70-130	11/26/2019 1007
Methyl tertiary butyl ether (MTBE)	50	42		1	83	70-130	11/26/2019 1007
4-Methyl-2-pentanone	100	96		1	96	70-130	11/26/2019 1007
Methylcyclohexane	50	50		1	100	70-130	11/26/2019 1007
Methylene chloride	50	39		1	78	70-130	11/26/2019 1007
Styrene	50	48		1	96	70-130	11/26/2019 1007
1,1,2,2-Tetrachloroethane	50	45		1	89	70-130	11/26/2019 1007
Tetrachloroethene	50	46		1	92	70-130	11/26/2019 1007
Toluene	50	45		1	90	70-130	11/26/2019 1007
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	43		1	87	70-130	11/26/2019 1007
1,2,4-Trichlorobenzene	50	46		1	93	70-130	11/26/2019 1007
1,1,1-Trichloroethane	50	43		1	86	70-130	11/26/2019 1007
1,1,2-Trichloroethane	50	44		1	88	70-130	11/26/2019 1007

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37119-002

Matrix: Aqueous

Batch: 37119

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	45		1	89	70-130	11/26/2019 1007
Trichlorofluoromethane	50	48		1	95	70-130	11/26/2019 1007
Vinyl chloride	50	41		1	83	70-130	11/26/2019 1007
Xylenes (total)	100	95		1	95	70-130	11/26/2019 1007
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		89			70-130		
Bromofluorobenzene		98			70-130		
Toluene-d8		96			70-130		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37193-001

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	11/26/2019 1952
Benzene	ND		1	5.0	ug/kg	11/26/2019 1952
Bromodichloromethane	ND		1	5.0	ug/kg	11/26/2019 1952
Bromoform	ND		1	5.0	ug/kg	11/26/2019 1952
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	11/26/2019 1952
2-Butanone (MEK)	ND		1	20	ug/kg	11/26/2019 1952
Carbon disulfide	ND		1	5.0	ug/kg	11/26/2019 1952
Carbon tetrachloride	ND		1	5.0	ug/kg	11/26/2019 1952
Chlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Chloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
Chloroform	ND		1	5.0	ug/kg	11/26/2019 1952
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	11/26/2019 1952
Cyclohexane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	11/26/2019 1952
Dibromochloromethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Dichlorodifluoromethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
1,2-Dichloropropane	ND		1	5.0	ug/kg	11/26/2019 1952
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1952
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	11/26/2019 1952
Ethylbenzene	ND		1	5.0	ug/kg	11/26/2019 1952
2-Hexanone	ND		1	10	ug/kg	11/26/2019 1952
Isopropylbenzene	ND		1	5.0	ug/kg	11/26/2019 1952
Methyl acetate	ND		1	5.0	ug/kg	11/26/2019 1952
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	11/26/2019 1952
4-Methyl-2-pentanone	ND		1	10	ug/kg	11/26/2019 1952
Methylcyclohexane	ND		1	5.0	ug/kg	11/26/2019 1952
Methylene chloride	ND		1	5.0	ug/kg	11/26/2019 1952
Styrene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
Tetrachloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
Toluene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	11/26/2019 1952

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37193-001

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	11/26/2019 1952
Trichlorofluoromethane	ND		1	5.0	ug/kg	11/26/2019 1952
Vinyl chloride	ND		1	5.0	ug/kg	11/26/2019 1952
Xylenes (total)	ND		1	10	ug/kg	11/26/2019 1952
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		109	53-142			
Bromofluorobenzene		110	47-138			
Toluene-d8		119	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: UK25040

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37193-002

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	104	60-140	11/26/2019 1851
Benzene	50	50		1	100	70-130	11/26/2019 1851
Bromodichloromethane	50	51		1	103	70-130	11/26/2019 1851
Bromoform	50	53		1	105	70-130	11/26/2019 1851
Bromomethane (Methyl bromide)	50	48		1	95	70-130	11/26/2019 1851
2-Butanone (MEK)	100	100		1	102	60-140	11/26/2019 1851
Carbon disulfide	50	49		1	97	70-130	11/26/2019 1851
Carbon tetrachloride	50	52		1	103	70-130	11/26/2019 1851
Chlorobenzene	50	50		1	101	70-130	11/26/2019 1851
Chloroethane	50	53		1	107	70-130	11/26/2019 1851
Chloroform	50	50		1	100	70-130	11/26/2019 1851
Chloromethane (Methyl chloride)	50	44		1	88	60-140	11/26/2019 1851
Cyclohexane	50	54		1	108	70-130	11/26/2019 1851
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	97	70-130	11/26/2019 1851
Dibromochloromethane	50	52		1	104	70-130	11/26/2019 1851
1,2-Dibromoethane (EDB)	50	51		1	102	70-130	11/26/2019 1851
1,2-Dichlorobenzene	50	51		1	101	70-130	11/26/2019 1851
1,3-Dichlorobenzene	50	51		1	101	70-130	11/26/2019 1851
1,4-Dichlorobenzene	50	51		1	102	70-130	11/26/2019 1851
Dichlorodifluoromethane	50	49		1	99	60-140	11/26/2019 1851
1,1-Dichloroethane	50	49		1	99	70-130	11/26/2019 1851
1,2-Dichloroethane	50	48		1	95	70-130	11/26/2019 1851
1,1-Dichloroethene	50	59		1	118	70-130	11/26/2019 1851
cis-1,2-Dichloroethene	50	50		1	101	70-130	11/26/2019 1851
trans-1,2-Dichloroethene	50	55		1	110	70-130	11/26/2019 1851
1,2-Dichloropropane	50	51		1	102	70-130	11/26/2019 1851
cis-1,3-Dichloropropene	50	53		1	106	70-130	11/26/2019 1851
trans-1,3-Dichloropropene	50	53		1	106	70-130	11/26/2019 1851
Ethylbenzene	50	52		1	103	70-130	11/26/2019 1851
2-Hexanone	100	100		1	100	70-130	11/26/2019 1851
Isopropylbenzene	50	50		1	101	70-130	11/26/2019 1851
Methyl acetate	50	47		1	94	70-130	11/26/2019 1851
Methyl tertiary butyl ether (MTBE)	50	48		1	97	70-130	11/26/2019 1851
4-Methyl-2-pentanone	100	94		1	94	70-130	11/26/2019 1851
Methylcyclohexane	50	55		1	110	70-130	11/26/2019 1851
Methylene chloride	50	48		1	96	70-130	11/26/2019 1851
Styrene	50	51		1	101	70-130	11/26/2019 1851
1,1,2,2-Tetrachloroethane	50	47		1	94	70-130	11/26/2019 1851
Tetrachloroethene	50	57		1	113	70-130	11/26/2019 1851
Toluene	50	51		1	102	70-130	11/26/2019 1851
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	52		1	104	70-130	11/26/2019 1851
1,2,4-Trichlorobenzene	50	53		1	106	70-130	11/26/2019 1851
1,1,1-Trichloroethane	50	51		1	103	70-130	11/26/2019 1851
1,1,2-Trichloroethane	50	49		1	98	70-130	11/26/2019 1851

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37193-002

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	53		1	106	70-130	11/26/2019 1851
Trichlorofluoromethane	50	54		1	108	70-130	11/26/2019 1851
Vinyl chloride	50	44		1	88	70-130	11/26/2019 1851
Xylenes (total)	100	100		1	102	70-130	11/26/2019 1851
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		103	53-142				
Bromofluorobenzene		120	47-138				
Toluene-d8		118	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37193-003

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	97		1	97	7.2	60-140	20	11/26/2019 1929
Benzene	50	47		1	94	7.0	70-130	20	11/26/2019 1929
Bromodichloromethane	50	49		1	98	4.6	70-130	20	11/26/2019 1929
Bromoform	50	52		1	103	1.9	70-130	20	11/26/2019 1929
Bromomethane (Methyl bromide)	50	44		1	89	6.7	70-130	20	11/26/2019 1929
2-Butanone (MEK)	100	95		1	95	6.2	60-140	20	11/26/2019 1929
Carbon disulfide	50	43		1	87	11	70-130	20	11/26/2019 1929
Carbon tetrachloride	50	46		1	92	11	70-130	20	11/26/2019 1929
Chlorobenzene	50	48		1	96	4.6	70-130	20	11/26/2019 1929
Chloroethane	50	48		1	96	10	70-130	20	11/26/2019 1929
Chloroform	50	46		1	93	7.7	70-130	20	11/26/2019 1929
Chloromethane (Methyl chloride)	50	40		1	79	11	60-140	20	11/26/2019 1929
Cyclohexane	50	47		1	94	14	70-130	20	11/26/2019 1929
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	0.97	70-130	20	11/26/2019 1929
Dibromochloromethane	50	50		1	100	4.0	70-130	20	11/26/2019 1929
1,2-Dibromoethane (EDB)	50	49		1	98	4.2	70-130	20	11/26/2019 1929
1,2-Dichlorobenzene	50	50		1	99	1.7	70-130	20	11/26/2019 1929
1,3-Dichlorobenzene	50	50		1	99	2.2	70-130	20	11/26/2019 1929
1,4-Dichlorobenzene	50	49		1	99	2.9	70-130	20	11/26/2019 1929
Dichlorodifluoromethane	50	44		1	87	13	60-140	20	11/26/2019 1929
1,1-Dichloroethane	50	45		1	90	9.0	70-130	20	11/26/2019 1929
1,2-Dichloroethane	50	45		1	89	6.5	70-130	20	11/26/2019 1929
1,1-Dichloroethene	50	52		1	105	12	70-130	20	11/26/2019 1929
cis-1,2-Dichloroethene	50	46		1	92	9.0	70-130	20	11/26/2019 1929
trans-1,2-Dichloroethene	50	50		1	99	11	70-130	20	11/26/2019 1929
1,2-Dichloropropane	50	48		1	96	5.7	70-130	20	11/26/2019 1929
cis-1,3-Dichloropropene	50	51		1	102	4.4	70-130	20	11/26/2019 1929
trans-1,3-Dichloropropene	50	51		1	102	3.2	70-130	20	11/26/2019 1929
Ethylbenzene	50	48		1	96	7.2	70-130	20	11/26/2019 1929
2-Hexanone	100	98		1	98	1.8	70-130	20	11/26/2019 1929
Isopropylbenzene	50	48		1	96	5.2	70-130	20	11/26/2019 1929
Methyl acetate	50	46		1	91	3.0	70-130	20	11/26/2019 1929
Methyl tertiary butyl ether (MTBE)	50	46		1	92	4.6	70-130	20	11/26/2019 1929
4-Methyl-2-pentanone	100	91		1	91	3.2	70-130	20	11/26/2019 1929
Methylcyclohexane	50	49		1	98	11	70-130	20	11/26/2019 1929
Methylene chloride	50	45		1	89	7.3	70-130	20	11/26/2019 1929
Styrene	50	48		1	96	5.1	70-130	20	11/26/2019 1929
1,1,2,2-Tetrachloroethane	50	47		1	93	1.2	70-130	20	11/26/2019 1929
Tetrachloroethene	50	52		1	105	7.7	70-130	20	11/26/2019 1929
Toluene	50	48		1	96	6.5	70-130	20	11/26/2019 1929
1,1,2-Trichloro-1,1,2-Trifluoroethane	50	46		1	92	13	70-130	20	11/26/2019 1929
1,2,4-Trichlorobenzene	50	52		1	105	1.3	70-130	20	11/26/2019 1929
1,1,1-Trichloroethane	50	46		1	92	11	70-130	20	11/26/2019 1929
1,1,2-Trichloroethane	50	48		1	96	1.6	70-130	20	11/26/2019 1929

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37193-003

Matrix: Solid

Batch: 37193

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	49		1	97	8.2	70-130	20	11/26/2019 1929
Trichlorofluoromethane	50	48		1	96	12	70-130	20	11/26/2019 1929
Vinyl chloride	50	40		1	80	10	70-130	20	11/26/2019 1929
Xylenes (total)	100	97		1	97	6.0	70-130	20	11/26/2019 1929
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		100	53-142						
Bromofluorobenzene		120	47-138						
Toluene-d8		119	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37558-001

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/02/2019 0938
Benzene	ND		1	5.0	ug/kg	12/02/2019 0938
Bromodichloromethane	ND		1	5.0	ug/kg	12/02/2019 0938
Bromoform	ND		1	5.0	ug/kg	12/02/2019 0938
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/02/2019 0938
2-Butanone (MEK)	ND		1	20	ug/kg	12/02/2019 0938
Carbon disulfide	ND		1	5.0	ug/kg	12/02/2019 0938
Carbon tetrachloride	ND		1	5.0	ug/kg	12/02/2019 0938
Chlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
Chloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
Chloroform	ND		1	5.0	ug/kg	12/02/2019 0938
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/02/2019 0938
Cyclohexane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/02/2019 0938
Dibromochloromethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/02/2019 0938
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/02/2019 0938
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/02/2019 0938
Ethylbenzene	ND		1	5.0	ug/kg	12/02/2019 0938
2-Hexanone	ND		1	10	ug/kg	12/02/2019 0938
Isopropylbenzene	ND		1	5.0	ug/kg	12/02/2019 0938
Methyl acetate	ND		1	5.0	ug/kg	12/02/2019 0938
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/02/2019 0938
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/02/2019 0938
Methylcyclohexane	ND		1	5.0	ug/kg	12/02/2019 0938
Methylene chloride	ND		1	5.0	ug/kg	12/02/2019 0938
Styrene	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
Tetrachloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
Toluene	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/02/2019 0938

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37558-001

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/02/2019 0938
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/02/2019 0938
Vinyl chloride	ND		1	5.0	ug/kg	12/02/2019 0938
Xylenes (total)	ND		1	10	ug/kg	12/02/2019 0938
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		91	53-142			
Bromofluorobenzene		102	47-138			
Toluene-d8		104	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37558-002

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	112	60-140	12/02/2019 0915
Benzene	50	49		1	99	70-130	12/02/2019 0915
Bromodichloromethane	50	50		1	100	70-130	12/02/2019 0915
Bromoform	50	50		1	100	70-130	12/02/2019 0915
Bromomethane (Methyl bromide)	50	47		1	93	70-130	12/02/2019 0915
2-Butanone (MEK)	100	100		1	103	60-140	12/02/2019 0915
Carbon disulfide	50	49		1	99	70-130	12/02/2019 0915
Carbon tetrachloride	50	50		1	101	70-130	12/02/2019 0915
Chlorobenzene	50	49		1	98	70-130	12/02/2019 0915
Chloroethane	50	53		1	106	70-130	12/02/2019 0915
Chloroform	50	50		1	99	70-130	12/02/2019 0915
Chloromethane (Methyl chloride)	50	48		1	95	60-140	12/02/2019 0915
Cyclohexane	50	47		1	95	70-130	12/02/2019 0915
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	91	70-130	12/02/2019 0915
Dibromochloromethane	50	50		1	100	70-130	12/02/2019 0915
1,2-Dibromoethane (EDB)	50	48		1	97	70-130	12/02/2019 0915
1,2-Dichlorobenzene	50	48		1	97	70-130	12/02/2019 0915
1,3-Dichlorobenzene	50	49		1	98	70-130	12/02/2019 0915
1,4-Dichlorobenzene	50	48		1	97	70-130	12/02/2019 0915
Dichlorodifluoromethane	50	41		1	83	60-140	12/02/2019 0915
1,1-Dichloroethane	50	50		1	100	70-130	12/02/2019 0915
1,2-Dichloroethane	50	48		1	96	70-130	12/02/2019 0915
1,1-Dichloroethene	50	57		1	114	70-130	12/02/2019 0915
cis-1,2-Dichloroethene	50	50		1	100	70-130	12/02/2019 0915
trans-1,2-Dichloroethene	50	54		1	107	70-130	12/02/2019 0915
1,2-Dichloropropane	50	50		1	99	70-130	12/02/2019 0915
cis-1,3-Dichloropropene	50	53		1	106	70-130	12/02/2019 0915
trans-1,3-Dichloropropene	50	53		1	106	70-130	12/02/2019 0915
Ethylbenzene	50	50		1	101	70-130	12/02/2019 0915
2-Hexanone	100	110		1	110	70-130	12/02/2019 0915
Isopropylbenzene	50	49		1	98	70-130	12/02/2019 0915
Methyl acetate	50	48		1	96	70-130	12/02/2019 0915
Methyl tertiary butyl ether (MTBE)	50	48		1	97	70-130	12/02/2019 0915
4-Methyl-2-pentanone	100	95		1	95	70-130	12/02/2019 0915
Methylcyclohexane	50	48		1	96	70-130	12/02/2019 0915
Methylene chloride	50	47		1	93	70-130	12/02/2019 0915
Styrene	50	51		1	101	70-130	12/02/2019 0915
1,1,2,2-Tetrachloroethane	50	47		1	93	70-130	12/02/2019 0915
Tetrachloroethene	50	51		1	101	70-130	12/02/2019 0915
Toluene	50	48		1	96	70-130	12/02/2019 0915
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	12/02/2019 0915
1,2,4-Trichlorobenzene	50	48		1	95	70-130	12/02/2019 0915
1,1,1-Trichloroethane	50	50		1	100	70-130	12/02/2019 0915
1,1,2-Trichloroethane	50	49		1	97	70-130	12/02/2019 0915

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37558-002

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	101	70-130	12/02/2019 0915
Trichlorofluoromethane	50	48		1	96	70-130	12/02/2019 0915
Vinyl chloride	50	46		1	91	70-130	12/02/2019 0915
Xylenes (total)	100	100		1	101	70-130	12/02/2019 0915
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		89	53-142				
Bromofluorobenzene		101	47-138				
Toluene-d8		102	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37558-003

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	110		1	109	3.1	60-140	20	12/02/2019 1709
Benzene	50	50		1	99	0.11	70-130	20	12/02/2019 1709
Bromodichloromethane	50	50		1	101	0.64	70-130	20	12/02/2019 1709
Bromoform	50	51		1	102	1.5	70-130	20	12/02/2019 1709
Bromomethane (Methyl bromide)	50	53		1	107	14	70-130	20	12/02/2019 1709
2-Butanone (MEK)	100	100		1	103	0.11	60-140	20	12/02/2019 1709
Carbon disulfide	50	50		1	101	2.3	70-130	20	12/02/2019 1709
Carbon tetrachloride	50	52		1	104	3.0	70-130	20	12/02/2019 1709
Chlorobenzene	50	50		1	99	0.88	70-130	20	12/02/2019 1709
Chloroethane	50	56		1	112	5.6	70-130	20	12/02/2019 1709
Chloroform	50	52		1	103	3.9	70-130	20	12/02/2019 1709
Chloromethane (Methyl chloride)	50	50		1	100	4.6	60-140	20	12/02/2019 1709
Cyclohexane	50	46		1	92	2.7	70-130	20	12/02/2019 1709
1,2-Dibromo-3-chloropropane (DBCP)	50	45		1	91	0.57	70-130	20	12/02/2019 1709
Dibromochloromethane	50	50		1	100	0.056	70-130	20	12/02/2019 1709
1,2-Dibromoethane (EDB)	50	49		1	97	0.96	70-130	20	12/02/2019 1709
1,2-Dichlorobenzene	50	50		1	100	3.3	70-130	20	12/02/2019 1709
1,3-Dichlorobenzene	50	51		1	101	2.9	70-130	20	12/02/2019 1709
1,4-Dichlorobenzene	50	50		1	101	4.2	70-130	20	12/02/2019 1709
Dichlorodifluoromethane	50	43		1	86	3.9	60-140	20	12/02/2019 1709
1,1-Dichloroethane	50	51		1	103	2.6	70-130	20	12/02/2019 1709
1,2-Dichloroethane	50	47		1	93	2.3	70-130	20	12/02/2019 1709
1,1-Dichloroethene	50	58		1	117	2.4	70-130	20	12/02/2019 1709
cis-1,2-Dichloroethene	50	51		1	103	2.9	70-130	20	12/02/2019 1709
trans-1,2-Dichloroethene	50	56		1	113	5.0	70-130	20	12/02/2019 1709
1,2-Dichloropropane	50	51		1	101	1.9	70-130	20	12/02/2019 1709
cis-1,3-Dichloropropene	50	53		1	107	0.48	70-130	20	12/02/2019 1709
trans-1,3-Dichloropropene	50	52		1	104	1.4	70-130	20	12/02/2019 1709
Ethylbenzene	50	51		1	103	2.1	70-130	20	12/02/2019 1709
2-Hexanone	100	100		1	104	5.4	70-130	20	12/02/2019 1709
Isopropylbenzene	50	50		1	100	1.9	70-130	20	12/02/2019 1709
Methyl acetate	50	50		1	100	4.4	70-130	20	12/02/2019 1709
Methyl tertiary butyl ether (MTBE)	50	51		1	103	5.9	70-130	20	12/02/2019 1709
4-Methyl-2-pentanone	100	98		1	98	2.2	70-130	20	12/02/2019 1709
Methylcyclohexane	50	45		1	91	5.2	70-130	20	12/02/2019 1709
Methylene chloride	50	48		1	96	3.2	70-130	20	12/02/2019 1709
Styrene	50	51		1	102	0.42	70-130	20	12/02/2019 1709
1,1,2,2-Tetrachloroethane	50	48		1	96	3.3	70-130	20	12/02/2019 1709
Tetrachloroethene	50	51		1	103	1.2	70-130	20	12/02/2019 1709
Toluene	50	48		1	95	1.2	70-130	20	12/02/2019 1709
1,1,2-Trichloro-1,1,2-Trifluoroethane	50	45		1	89	3.4	70-130	20	12/02/2019 1709
1,2,4-Trichlorobenzene	50	51		1	102	6.3	70-130	20	12/02/2019 1709
1,1,1-Trichloroethane	50	52		1	103	3.1	70-130	20	12/02/2019 1709
1,1,2-Trichloroethane	50	49		1	97	0.12	70-130	20	12/02/2019 1709

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ37558-003

Matrix: Solid

Batch: 37558

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	50		1	100	0.41	70-130	20	12/02/2019 1709
Trichlorofluoromethane	50	49		1	99	3.3	70-130	20	12/02/2019 1709
Vinyl chloride	50	47		1	94	3.5	70-130	20	12/02/2019 1709
Xylenes (total)	100	100		1	102	0.55	70-130	20	12/02/2019 1709
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		88	53-142						
Bromofluorobenzene		98	47-138						
Toluene-d8		98	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37407-001

Matrix: Solid

Batch: 37407

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1329

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acenaphthene	ND		1	13	ug/kg	12/02/2019 1137
Acenaphthylene	ND		1	13	ug/kg	12/02/2019 1137
Acetophenone	ND		1	67	ug/kg	12/02/2019 1137
Anthracene	ND		1	13	ug/kg	12/02/2019 1137
Atrazine	ND		1	67	ug/kg	12/02/2019 1137
Benzaldehyde	ND		1	67	ug/kg	12/02/2019 1137
Benzo(a)anthracene	ND		1	13	ug/kg	12/02/2019 1137
Benzo(a)pyrene	ND		1	13	ug/kg	12/02/2019 1137
Benzo(b)fluoranthene	ND		1	13	ug/kg	12/02/2019 1137
Benzo(g,h,i)perylene	ND		1	13	ug/kg	12/02/2019 1137
Benzo(k)fluoranthene	ND		1	13	ug/kg	12/02/2019 1137
1,1'-Biphenyl	ND		1	67	ug/kg	12/02/2019 1137
4-Bromophenyl phenyl ether	ND		1	67	ug/kg	12/02/2019 1137
Butyl benzyl phthalate	ND		1	67	ug/kg	12/02/2019 1137
Caprolactam	ND		1	67	ug/kg	12/02/2019 1137
Carbazole	ND		1	67	ug/kg	12/02/2019 1137
bis (2-Chloro-1-methylethyl) ether	ND		1	67	ug/kg	12/02/2019 1137
4-Chloro-3-methyl phenol	ND		1	67	ug/kg	12/02/2019 1137
4-Chloroaniline	ND		1	67	ug/kg	12/02/2019 1137
bis(2-Chloroethoxy)methane	ND		1	67	ug/kg	12/02/2019 1137
bis(2-Chloroethyl)ether	ND		1	67	ug/kg	12/02/2019 1137
2-Chloronaphthalene	ND		1	67	ug/kg	12/02/2019 1137
2-Chlorophenol	ND		1	67	ug/kg	12/02/2019 1137
4-Chlorophenyl phenyl ether	ND		1	67	ug/kg	12/02/2019 1137
Chrysene	ND		1	13	ug/kg	12/02/2019 1137
Dibenzo(a,h)anthracene	ND		1	13	ug/kg	12/02/2019 1137
Dibenzofuran	ND		1	67	ug/kg	12/02/2019 1137
3,3'-Dichlorobenzidine	ND		1	67	ug/kg	12/02/2019 1137
2,4-Dichlorophenol	ND		1	67	ug/kg	12/02/2019 1137
Diethylphthalate	ND		1	67	ug/kg	12/02/2019 1137
Dimethyl phthalate	ND		1	67	ug/kg	12/02/2019 1137
2,4-Dimethylphenol	ND		1	67	ug/kg	12/02/2019 1137
Di-n-butyl phthalate	ND		1	67	ug/kg	12/02/2019 1137
4,6-Dinitro-2-methylphenol	ND		1	330	ug/kg	12/02/2019 1137
2,4-Dinitrophenol	ND		1	330	ug/kg	12/02/2019 1137
2,4-Dinitrotoluene	ND		1	130	ug/kg	12/02/2019 1137
2,6-Dinitrotoluene	ND		1	130	ug/kg	12/02/2019 1137
Di-n-octylphthalate	ND		1	67	ug/kg	12/02/2019 1137
bis(2-Ethylhexyl)phthalate	ND		1	67	ug/kg	12/02/2019 1137
Fluoranthene	ND		1	13	ug/kg	12/02/2019 1137
Fluorene	ND		1	13	ug/kg	12/02/2019 1137
Hexachlorobenzene	ND		1	67	ug/kg	12/02/2019 1137
Hexachlorobutadiene	ND		1	67	ug/kg	12/02/2019 1137
Hexachlorocyclopentadiene	ND		1	330	ug/kg	12/02/2019 1137

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37407-001

Matrix: Solid

Batch: 37407

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1329

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Hexachloroethane	ND		1	67	ug/kg	12/02/2019 1137
Indeno(1,2,3-c,d)pyrene	ND		1	13	ug/kg	12/02/2019 1137
Isophorone	ND		1	67	ug/kg	12/02/2019 1137
2-Methylnaphthalene	ND		1	13	ug/kg	12/02/2019 1137
2-Methylphenol	ND		1	67	ug/kg	12/02/2019 1137
3+4-Methylphenol	ND		1	130	ug/kg	12/02/2019 1137
Naphthalene	ND		1	13	ug/kg	12/02/2019 1137
2-Nitroaniline	ND		1	130	ug/kg	12/02/2019 1137
3-Nitroaniline	ND		1	130	ug/kg	12/02/2019 1137
4-Nitroaniline	ND		1	130	ug/kg	12/02/2019 1137
Nitrobenzene	ND		1	67	ug/kg	12/02/2019 1137
2-Nitrophenol	ND		1	130	ug/kg	12/02/2019 1137
4-Nitrophenol	ND		1	330	ug/kg	12/02/2019 1137
N-Nitrosodi-n-propylamine	ND		1	67	ug/kg	12/02/2019 1137
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	ug/kg	12/02/2019 1137
Pentachlorophenol	ND		1	330	ug/kg	12/02/2019 1137
Phenanthrene	ND		1	13	ug/kg	12/02/2019 1137
Phenol	ND		1	67	ug/kg	12/02/2019 1137
Pyrene	ND		1	13	ug/kg	12/02/2019 1137
2,4,5-Trichlorophenol	ND		1	67	ug/kg	12/02/2019 1137
2,4,6-Trichlorophenol	ND		1	67	ug/kg	12/02/2019 1137

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		62	24-137
2-Fluorophenol		66	16-136
Nitrobenzene-d5		59	12-144
Phenol-d5		71	26-148
Terphenyl-d14		79	20-127
2,4,6-Tribromophenol		62	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37407-002

Matrix: Solid

Batch: 37407

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1329

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	670	440		1	66	46-114	12/02/2019 1202
Acenaphthylene	670	450		1	67	44-122	12/02/2019 1202
Acetophenone	670	450		1	67	48-111	12/02/2019 1202
Anthracene	670	460		1	69	50-119	12/02/2019 1202
Atrazine	670	460		1	69	48-116	12/02/2019 1202
Benzaldehyde	670	390		1	58	10-110	12/02/2019 1202
Benzo(a)anthracene	670	460		1	68	47-121	12/02/2019 1202
Benzo(a)pyrene	670	470		1	70	55-134	12/02/2019 1202
Benzo(b)fluoranthene	670	470		1	71	28-139	12/02/2019 1202
Benzo(g,h,i)perylene	670	490		1	74	36-125	12/02/2019 1202
Benzo(k)fluoranthene	670	450		1	68	47-130	12/02/2019 1202
1,1'-Biphenyl	670	450		1	68	49-110	12/02/2019 1202
4-Bromophenyl phenyl ether	670	500		1	75	46-118	12/02/2019 1202
Butyl benzyl phthalate	670	400		1	60	46-128	12/02/2019 1202
Caprolactam	670	510		1	77	43-121	12/02/2019 1202
Carbazole	670	480		1	73	47-128	12/02/2019 1202
bis (2-Chloro-1-methylethyl) ether	670	530		1	80	31-102	12/02/2019 1202
4-Chloro-3-methyl phenol	670	470		1	71	49-118	12/02/2019 1202
4-Chloroaniline	670	490		1	73	17-106	12/02/2019 1202
bis(2-Chloroethoxy)methane	670	470		1	71	39-108	12/02/2019 1202
bis(2-Chloroethyl)ether	670	510		1	76	32-105	12/02/2019 1202
2-Chloronaphthalene	670	450		1	67	31-127	12/02/2019 1202
2-Chlorophenol	670	500		1	75	37-106	12/02/2019 1202
4-Chlorophenyl phenyl ether	670	470		1	70	47-116	12/02/2019 1202
Chrysene	670	450		1	67	45-126	12/02/2019 1202
Dibenzo(a,h)anthracene	670	500		1	74	45-122	12/02/2019 1202
Dibenzofuran	670	440		1	66	45-112	12/02/2019 1202
3,3'-Dichlorobenzidine	670	420		1	64	10-119	12/02/2019 1202
2,4-Dichlorophenol	670	470		1	71	41-113	12/02/2019 1202
Diethylphthalate	670	440		1	66	49-123	12/02/2019 1202
Dimethyl phthalate	670	450		1	67	48-120	12/02/2019 1202
2,4-Dimethylphenol	670	560		1	83	33-123	12/02/2019 1202
Di-n-butyl phthalate	670	450		1	68	51-129	12/02/2019 1202
4,6-Dinitro-2-methylphenol	670	530		1	80	40-130	12/02/2019 1202
2,4-Dinitrophenol	1300	910		1	68	10-113	12/02/2019 1202
2,4-Dinitrotoluene	670	460		1	69	48-124	12/02/2019 1202
2,6-Dinitrotoluene	670	460		1	69	47-125	12/02/2019 1202
Di-n-octylphthalate	670	420		1	63	49-142	12/02/2019 1202
bis(2-Ethylhexyl)phthalate	670	430		1	64	45-128	12/02/2019 1202
Fluoranthene	670	470		1	70	50-123	12/02/2019 1202
Fluorene	670	440		1	66	48-117	12/02/2019 1202
Hexachlorobenzene	670	470		1	71	44-122	12/02/2019 1202
Hexachlorobutadiene	670	480		1	71	33-103	12/02/2019 1202
Hexachlorocyclopentadiene	3300	2400		1	72	18-121	12/02/2019 1202

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37407-002

Matrix: Solid

Batch: 37407

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 11/29/2019 1329

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	670	450		1	68	30-96	12/02/2019 1202
Indeno(1,2,3-c,d)pyrene	670	500		1	75	45-123	12/02/2019 1202
Isophorone	670	490		1	73	41-113	12/02/2019 1202
2-Methylnaphthalene	670	460		1	69	40-106	12/02/2019 1202
2-Methylphenol	670	550		1	82	32-107	12/02/2019 1202
3+4-Methylphenol	670	520		1	77	39-108	12/02/2019 1202
Naphthalene	670	460		1	69	36-110	12/02/2019 1202
2-Nitroaniline	670	470		1	70	45-123	12/02/2019 1202
3-Nitroaniline	670	400		1	60	24-127	12/02/2019 1202
4-Nitroaniline	670	470		1	70	48-127	12/02/2019 1202
Nitrobenzene	670	450		1	68	33-114	12/02/2019 1202
2-Nitrophenol	670	460		1	70	35-108	12/02/2019 1202
4-Nitrophenol	1300	600		1	45	18-154	12/02/2019 1202
N-Nitrosodi-n-propylamine	670	540		1	81	32-115	12/02/2019 1202
N-Nitrosodiphenylamine (Diphenylamine)	670	490		1	73	53-150	12/02/2019 1202
Pentachlorophenol	1300	960		1	72	27-138	12/02/2019 1202
Phenanthrene	670	460		1	69	49-117	12/02/2019 1202
Phenol	670	520		1	79	36-108	12/02/2019 1202
Pyrene	670	450		1	67	47-119	12/02/2019 1202
2,4,5-Trichlorophenol	670	450		1	68	46-122	12/02/2019 1202
2,4,6-Trichlorophenol	670	450		1	68	38-115	12/02/2019 1202

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		65	24-137
2-Fluorophenol		68	16-136
Nitrobenzene-d5		63	12-144
Phenol-d5		73	26-148
Terphenyl-d14		76	20-127
2,4,6-Tribromophenol		70	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results




Chain of Custody  
and  
Miscellaneous Documents

101670  
Number

**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**

Client: Westin-House Telephone No. / E-mail: 803 647 1420 Order No. \_\_\_\_\_  
 Address: 5801 Buff Rd Analysis (Attach list if more space is needed) \_\_\_\_\_  
 City: Hopkins State: SC Zip Code: \_\_\_\_\_ Page 1 of 1  
 Project Name: RF Implementation  UJK25040  
 Project No: 60595049 GIR# \_\_\_\_\_  
 Sample ID / Description: \_\_\_\_\_  
 (Containers for each sample may be combined on one line.)

Sample ID / Description	Date	Time	Matrix				No. of Containers by Preservative Type				Remarks / Cooler I.D.	
			Soil	Water	Sludge	Other	None	Formaldehyde	Other	Other		
SED-41 0-6"	11-25-19	0830	X				1					
SED-42 0-6"		0835	X				1					
SED-44 0-6"		1150	X				1					
SED-43 0-6"		1220	X				1					
SED-46 0-6"		1450	X				1					
SED-45 0-6"		1525	X				1					
TB-01 - 11/25/19			X				2					

Report to Contact: Diana Jaynes  
 Sampler's Signature: [Signature]  
 Printed Name: Diana Jaynes

Turn Around Time Required (Prior lab approval required for expedited TAT.)  
 Standard  Rush (Specify) \_\_\_\_\_  
 1. Relinquished by: [Signature] Date: 11-25-19 Time: 1702  
 2. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 4. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Sample Disposal:  Return to Client  Disposal by Lab  
 Possible Hazard Identification:  Non-Hazard  Flammable  Skin Irritant  Poison  Unknown

QC Requirements (Specify):  
 Date: 11/25/19 Time: 1702  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: 11/25/19 Time: 1702

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY  
 Received on ice (Certs) Yes  No  Recipient Temp. 56 °C

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: ME0018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: Westinghouse Cooler Inspected by/date: BMG / 11/25/19 Lot #: UK25040

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>19-2044</u>	
<u>5.6 / 5.6</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>NA</u>
<b>Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)</b>	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # <u>NA</u>	
Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Samples(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: <u>NA</u>	
SR barcode labels applied by: <u>BMG</u> Date: <u>11/25/19</u>	

Comments:

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# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

### Westinghouse Electric Company

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: RI Implementation

Project Number: 60595649

Lot Number: **UL02023**

Date Completed: 12/12/2019



12/12/2019 1:56 PM

Approved and released by:  
Project Manager: Grant Wilton



The electronic signature above is the equivalent of a handwritten signature.  
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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: UL02023

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

### Semivolatile Organic Analysis – Method 8270D

Sample -001 thru -007: The samples were analyzed at a 5X dilution due to the high concentration of non-target analytes present. The reporting limits were raised accordingly.

Sample -002: The surrogate, 2,4,6-Tribromophenol, was recovered below control limits due to matrix interference.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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**Sample Summary**  
**Westinghouse Electric Company**  
**Lot Number: UL02023**  
**Project Name: RI Implementation**  
**Project Number: 60595649**

<b>Sample Number</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Sampled</b>	<b>Date Received</b>
001	SED-54 0"-6"	Solid	12/02/2019 1105	12/02/2019
002	SED-54 6"-12"	Solid	12/02/2019 1110	12/02/2019
003	SED-55 0"-6"	Solid	12/02/2019 1115	12/02/2019
004	SED-55 6"-12"	Solid	12/02/2019 1120	12/02/2019
005	SED-56 0"-6"	Solid	12/02/2019 1125	12/02/2019
006	SED-56 0"-6" DUP	Solid	12/02/2019 1125	12/02/2019
007	SED-56 6"-12"	Solid	12/02/2019 1130	12/02/2019
008	EB-01-120219	Aqueous	12/02/2019 1235	12/02/2019
009	TB-01-120219	Aqueous	12/02/2019	12/02/2019

(9 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

**Detection Summary**  
**Westinghouse Electric Company**  
**Lot Number: UL02023**  
**Project Name: RI Implementation**  
**Project Number: 60595649**

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-54 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.63		mg/kg	6
001	SED-54 0"-6"	Solid	Acetone	8260B	330		ug/kg	7
001	SED-54 0"-6"	Solid	2-Butanone (MEK)	8260B	42		ug/kg	7
001	SED-54 0"-6"	Solid	Methyl acetate	8260B	12		ug/kg	7
002	SED-54 6"-12"	Solid	Nitrate - N (soluble)	9056A	0.68		mg/kg	11
002	SED-54 6"-12"	Solid	Acetone	8260B	39		ug/kg	12
004	SED-55 6"-12"	Solid	Acetone	8260B	200		ug/kg	22
005	SED-56 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.52		mg/kg	26
005	SED-56 0"-6"	Solid	Acetone	8260B	220		ug/kg	27
006	SED-56 0"-6" DUP	Solid	Nitrate - N (soluble)	9056A	0.74		mg/kg	31
006	SED-56 0"-6" DUP	Solid	Acetone	8260B	23		ug/kg	32

(11 detections)

# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-001</b>
Description: <b>SED-54 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1105</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>23.1 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1522	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.63		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-001</b>
Description: <b>SED-54 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1105</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>23.1 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0430	ALR1		37799	3.78

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>330</b>		<b>26</b>	<b>ug/kg</b>	<b>1</b>
Benzene	71-43-2	8260B	ND		6.6	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.6	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.6	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.6	ug/kg	1
<b>2-Butanone (MEK)</b>	<b>78-93-3</b>	<b>8260B</b>	<b>42</b>		<b>26</b>	<b>ug/kg</b>	<b>1</b>
Carbon disulfide	75-15-0	8260B	ND		6.6	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.6	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.6	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.6	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.6	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.6	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.6	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.6	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.6	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.6	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.6	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.6	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.6	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.6	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.6	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.6	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.6	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.6	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.6	ug/kg	1
<b>Methyl acetate</b>	<b>79-20-9</b>	<b>8260B</b>	<b>12</b>		<b>6.6</b>	<b>ug/kg</b>	<b>1</b>
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.6	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.6	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.6	ug/kg	1
Styrene	100-42-5	8260B	ND		6.6	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.6	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.6	ug/kg	1
Toluene	108-88-3	8260B	ND		6.6	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.6	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.6	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.6	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.6	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-001</b>
Description: <b>SED-54 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1105</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>23.1 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0430	ALR1		37799	3.78

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.6	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.6	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		79	47-138
Toluene-d8		117	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-001</b>
Description: <b>SED-54 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1105</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>23.1 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1927	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		630	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		630	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-001</b>
Description: <b>SED-54 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1105</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>23.1 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1927	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		630	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		630	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		630	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		630	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		630	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		48	24-137
2-Fluorophenol		53	16-136
Nitrobenzene-d5		49	12-144
Phenol-d5		57	26-148
Terphenyl-d14		63	20-127
2,4,6-Tribromophenol		42	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-002</b>
Description: <b>SED-54 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1110</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>
	% Solids: <b>33.7 12/02/2019 2318</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1545	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.68		0.50	mg/kg	1

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ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-002</b>
Description: <b>SED-54 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1110</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>33.7 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0452	ALR1		37799	3.95

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>39</b>		<b>25</b>	<b>ug/kg</b>	<b>1</b>
Benzene	71-43-2	8260B	ND		6.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		25	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.3	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.3	ug/kg	1
Styrene	100-42-5	8260B	ND		6.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.3	ug/kg	1
Toluene	108-88-3	8260B	ND		6.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.3	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-002</b>
Description: <b>SED-54 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1110</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>33.7 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0452	ALR1		37799	3.95

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	53-142
Bromofluorobenzene		85	47-138
Toluene-d8		110	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-002</b>
Description: <b>SED-54 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1110</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>33.7 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1950	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		63	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		63	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		63	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		63	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		63	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		63	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		63	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		63	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		63	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		63	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		620	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		620	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		63	ug/kg	1
Fluorene	86-73-7	8270D	ND		63	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-002</b>
Description: <b>SED-54 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1110</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>33.7 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1950	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		63	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		63	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		620	ug/kg	1
Naphthalene	91-20-3	8270D	ND		63	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		620	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		620	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		620	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		620	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		63	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		63	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		37	24-137
2-Fluorophenol		37	16-136
Nitrobenzene-d5		36	12-144
Phenol-d5		35	26-148
Terphenyl-d14		48	20-127
2,4,6-Tribromophenol	N	22	27-128

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-003</b>
Description: <b>SED-55 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1115</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>53.5 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1606	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-003</b>
Description: <b>SED-55 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1115</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>53.5 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1228	JM1		37838	5.13

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		19	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	ug/kg	1
Styrene	100-42-5	8260B	ND		4.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	ug/kg	1

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-003</b>
Description: <b>SED-55 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1115</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>53.5 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1228	JM1		37838	5.13

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		86	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-003</b>
Description: <b>SED-55 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1115</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>53.5 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2013	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		64	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		64	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		64	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		64	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		64	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		64	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		64	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		64	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		64	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		64	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		630	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		630	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		64	ug/kg	1
Fluorene	86-73-7	8270D	ND		64	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-003</b>
Description: <b>SED-55 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1115</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>53.5 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2013	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		64	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		64	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		630	ug/kg	1
Naphthalene	91-20-3	8270D	ND		64	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		630	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		630	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		630	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		630	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		64	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		64	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		44	24-137
2-Fluorophenol		32	16-136
Nitrobenzene-d5		47	12-144
Phenol-d5		43	26-148
Terphenyl-d14		56	20-127
2,4,6-Tribromophenol		43	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-004</b>
Description: <b>SED-55 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1120</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>
	% Solids: <b>61.4 12/02/2019 2318</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1710	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-004</b>
Description: <b>SED-55 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1120</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>61.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0515	ALR1		37799	5.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>200</b>		<b>20</b>	<b>ug/kg</b>	<b>1</b>
Benzene	71-43-2	8260B	ND		4.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	ug/kg	1
Styrene	100-42-5	8260B	ND		4.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-004</b>
Description: <b>SED-55 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1120</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>61.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0515	ALR1		37799	5.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		103	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-004</b>
Description: <b>SED-55 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1120</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>61.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2037	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-004</b>
Description: <b>SED-55 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1120</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>61.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2037	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		43	24-137
2-Fluorophenol		40	16-136
Nitrobenzene-d5		48	12-144
Phenol-d5		41	26-148
Terphenyl-d14		56	20-127
2,4,6-Tribromophenol		37	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-005</b>
Description: <b>SED-56 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>49.9 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1731	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.52		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-005</b>
Description: <b>SED-56 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>49.9 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1337	JM1		37838	4.79

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>220</b>		<b>21</b>	<b>ug/kg</b>	<b>1</b>
Benzene	71-43-2	8260B	ND		5.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.2	ug/kg	1
Styrene	100-42-5	8260B	ND		5.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-005</b>
Description: <b>SED-56 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>49.9 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1337	JM1		37838	4.79

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	53-142
Bromofluorobenzene		85	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-005</b>
Description: <b>SED-56 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>49.9 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2100	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		66	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		66	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		66	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		66	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		66	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		66	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		66	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		66	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		66	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		66	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		66	ug/kg	1
Fluorene	86-73-7	8270D	ND		66	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-005</b>
Description: <b>SED-56 0"-6"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>49.9 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2100	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		66	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		66	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		66	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		66	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		66	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	24-137
2-Fluorophenol		64	16-136
Nitrobenzene-d5		43	12-144
Phenol-d5		54	26-148
Terphenyl-d14		64	20-127
2,4,6-Tribromophenol		28	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-006</b>
Description: <b>SED-56 0"-6" DUP</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>
	% Solids: <b>52.4 12/02/2019 2318</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1834	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.74		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-006</b>
Description: <b>SED-56 0"-6" DUP</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>52.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1251	JM1		37838	5.18

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
<b>Acetone</b>	<b>67-64-1</b>	<b>8260B</b>	<b>23</b>		<b>19</b>	<b>ug/kg</b>	<b>1</b>
Benzene	71-43-2	8260B	ND		4.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.8	ug/kg	1
Styrene	100-42-5	8260B	ND		4.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.8	ug/kg	1
Toluene	108-88-3	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.8	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-006</b>
Description: <b>SED-56 0"-6" DUP</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>52.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1251	JM1		37838	5.18

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	53-142
Bromofluorobenzene		84	47-138
Toluene-d8		110	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-006</b>
Description: <b>SED-56 0"-6" DUP</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>52.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2123	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-006</b>
Description: <b>SED-56 0"-6" DUP</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1125</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>52.4 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2123	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		43	24-137
2-Fluorophenol		59	16-136
Nitrobenzene-d5		43	12-144
Phenol-d5		46	26-148
Terphenyl-d14		57	20-127
2,4,6-Tribromophenol		41	27-128

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-007</b>
Description: <b>SED-56 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1130</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>62.6 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1855	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-007</b>
Description: <b>SED-56 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1130</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>62.6 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/08/2019 2151	ALR1		38275	7.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		14	ug/kg	2
Benzene	71-43-2	8260B	ND		3.5	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		3.5	ug/kg	2
Bromoform	75-25-2	8260B	ND		3.5	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		3.5	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		14	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		3.5	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		3.5	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		3.5	ug/kg	2
Chloroethane	75-00-3	8260B	ND		3.5	ug/kg	2
Chloroform	67-66-3	8260B	ND		3.5	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		3.5	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		3.5	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		3.5	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		3.5	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		3.5	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		3.5	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		3.5	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		3.5	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		3.5	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		3.5	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		3.5	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		3.5	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		3.5	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		3.5	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		3.5	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		3.5	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		3.5	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		3.5	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		7.1	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		3.5	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		3.5	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		3.5	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		7.1	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		3.5	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		3.5	ug/kg	2
Styrene	100-42-5	8260B	ND		3.5	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		3.5	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		3.5	ug/kg	2
Toluene	108-88-3	8260B	ND		3.5	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		3.5	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		3.5	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		3.5	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		3.5	ug/kg	2

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-007</b>
Description: <b>SED-56 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1130</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>62.6 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/08/2019 2151	ALR1		38275	7.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		3.5	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		3.5	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		3.5	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		7.1	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	53-142
Bromofluorobenzene		97	47-138
Toluene-d8		107	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-007</b>
Description: <b>SED-56 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1130</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>62.6 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2147	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		66	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		66	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		66	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		66	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		66	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		66	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		66	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		66	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		66	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		66	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		66	ug/kg	1
Fluorene	86-73-7	8270D	ND		66	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-007</b>
Description: <b>SED-56 6"-12"</b>	Matrix: <b>Solid</b>
Date Sampled: <b>12/02/2019 1130</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	% Solids: <b>62.6 12/02/2019 2318</b>
Project Number: <b>60595649</b>	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2147	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		66	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		66	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		66	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		66	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		66	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		39	24-137
2-Fluorophenol		50	16-136
Nitrobenzene-d5		39	12-144
Phenol-d5		52	26-148
Terphenyl-d14		55	20-127
2,4,6-Tribromophenol		31	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-008</b>
Description: <b>EB-01-120219</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>12/02/2019 1235</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	12/03/2019 1129	AMR		37728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-008</b>
Description: <b>EB-01-120219</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>12/02/2019 1235</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1316	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-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
1,1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-008</b>
Description: <b>EB-01-120219</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>12/02/2019 1235</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1316	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-008</b>
Description: <b>EB-01-120219</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>12/02/2019 1235</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1716	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-008</b>
Description: <b>EB-01-120219</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>12/02/2019 1235</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1716	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		57	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		70	28-128
Terphenyl-d14		104	10-148
2,4,6-Tribromophenol		79	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-009</b>
Description: <b>TB-01-120219</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>12/02/2019</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1339	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	8260B	ND		1.0	ug/L	1
1,1,1,2-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
1,1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: <b>Westinghouse Electric Company</b>	Laboratory ID: <b>UL02023-009</b>
Description: <b>TB-01-120219</b>	Matrix: <b>Aqueous</b>
Date Sampled: <b>12/02/2019</b>	Project Name: <b>RI Implementation</b>
Date Received: <b>12/02/2019</b>	Project Number: <b>60595649</b>

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1339	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## QC Summary

# Inorganic non-metals - MB

Sample ID: UQ37728-001

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N	ND		1	0.020	mg/L	12/03/2019 1050

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and  $\geq$  DL

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

+ = RPD is out of criteria

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Inorganic non-metals - LCS

Sample ID: UQ37728-002

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.76		1	96	90-110	12/03/2019 1052

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and  $\geq$  DL

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

+ = RPD is out of criteria

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Inorganic non-metals - MS

Sample ID: UL02023-008MS

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	ND	0.80	0.83		1	104	90-110	12/03/2019 1131

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Inorganic non-metals - MSD

Sample ID: UL02023-008MD

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N	ND	0.80	0.78		1	98	5.7	90-110	20	12/03/2019 1136

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and  $\geq$  DL

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

+ = RPD is out of criteria

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Inorganic non-metals - MB

Sample ID: UQ38611-001

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N (soluble)	ND		1	0.50	mg/kg	12/10/2019 1437

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and  $\geq$  DL

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

+ = RPD is out of criteria

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

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QC Data for Lot Number: UL02023

# Inorganic non-metals - LCS

Sample ID: UQ38611-002

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	0.80	0.81		1	101	80-120	12/10/2019 1501

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Inorganic non-metals - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	ND	8.0	8.0		1	100	80-120	12/10/2019 1627

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Inorganic non-metals - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N (soluble)	ND	8.0	7.5		1	94	6.0	80-120	20	12/10/2019 1648

LOQ = Limit of Quantitation

DL = Detection Limit

LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%

J = Estimated result < LOQ and  $\geq$  DL

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

+ = RPD is out of criteria

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	12/03/2019 1035
Benzene	ND		1	1.0	ug/L	12/03/2019 1035
Bromodichloromethane	ND		1	1.0	ug/L	12/03/2019 1035
Bromoform	ND		1	1.0	ug/L	12/03/2019 1035
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	12/03/2019 1035
2-Butanone (MEK)	ND		1	10	ug/L	12/03/2019 1035
Carbon disulfide	ND		1	1.0	ug/L	12/03/2019 1035
Carbon tetrachloride	ND		1	1.0	ug/L	12/03/2019 1035
Chlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
Chloroethane	ND		1	2.0	ug/L	12/03/2019 1035
Chloroform	ND		1	1.0	ug/L	12/03/2019 1035
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	12/03/2019 1035
Cyclohexane	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	12/03/2019 1035
Dibromochloromethane	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
1,3-Dichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
1,4-Dichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
Dichlorodifluoromethane	ND		1	2.0	ug/L	12/03/2019 1035
1,1-Dichloroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dichloroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,1-Dichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dichloropropane	ND		1	1.0	ug/L	12/03/2019 1035
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	12/03/2019 1035
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	12/03/2019 1035
Ethylbenzene	ND		1	1.0	ug/L	12/03/2019 1035
2-Hexanone	ND		1	10	ug/L	12/03/2019 1035
Isopropylbenzene	ND		1	1.0	ug/L	12/03/2019 1035
Methyl acetate	ND		1	1.0	ug/L	12/03/2019 1035
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	12/03/2019 1035
4-Methyl-2-pentanone	ND		1	10	ug/L	12/03/2019 1035
Methylcyclohexane	ND		1	5.0	ug/L	12/03/2019 1035
Methylene chloride	ND		1	1.0	ug/L	12/03/2019 1035
Styrene	ND		1	1.0	ug/L	12/03/2019 1035
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	12/03/2019 1035
Tetrachloroethene	ND		1	1.0	ug/L	12/03/2019 1035
Toluene	ND		1	1.0	ug/L	12/03/2019 1035
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
1,1,1-Trichloroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,1,2-Trichloroethane	ND		1	1.0	ug/L	12/03/2019 1035

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
Trichlorofluoromethane	ND		1	1.0	ug/L	12/03/2019 1035
Vinyl chloride	ND		1	1.0	ug/L	12/03/2019 1035
Xylenes (total)	ND		1	1.0	ug/L	12/03/2019 1035
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		95	70-130			
Bromofluorobenzene		101	70-130			
Toluene-d8		100	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	12/03/2019 0947
Benzene	50	50		1	100	70-130	12/03/2019 0947
Bromodichloromethane	50	52		1	103	70-130	12/03/2019 0947
Bromoform	50	48		1	96	70-130	12/03/2019 0947
Bromomethane (Methyl bromide)	50	41		1	81	70-130	12/03/2019 0947
2-Butanone (MEK)	100	96		1	96	70-130	12/03/2019 0947
Carbon disulfide	50	43		1	86	70-130	12/03/2019 0947
Carbon tetrachloride	50	49		1	99	70-130	12/03/2019 0947
Chlorobenzene	50	50		1	99	70-130	12/03/2019 0947
Chloroethane	50	45		1	89	70-130	12/03/2019 0947
Chloroform	50	50		1	100	70-130	12/03/2019 0947
Chloromethane (Methyl chloride)	50	39		1	79	60-140	12/03/2019 0947
Cyclohexane	50	50		1	99	70-130	12/03/2019 0947
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	12/03/2019 0947
Dibromochloromethane	50	52		1	104	70-130	12/03/2019 0947
1,2-Dibromoethane (EDB)	50	50		1	99	70-130	12/03/2019 0947
1,2-Dichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,3-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
1,4-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
Dichlorodifluoromethane	50	42		1	84	60-140	12/03/2019 0947
1,1-Dichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,2-Dichloroethane	50	49		1	97	70-130	12/03/2019 0947
1,1-Dichloroethene	50	52		1	103	70-130	12/03/2019 0947
cis-1,2-Dichloroethene	50	49		1	97	70-130	12/03/2019 0947
trans-1,2-Dichloroethene	50	53		1	106	70-130	12/03/2019 0947
1,2-Dichloropropane	50	50		1	101	70-130	12/03/2019 0947
cis-1,3-Dichloropropene	50	55		1	110	70-130	12/03/2019 0947
trans-1,3-Dichloropropene	50	55		1	109	70-130	12/03/2019 0947
Ethylbenzene	50	50		1	101	70-130	12/03/2019 0947
2-Hexanone	100	95		1	95	70-130	12/03/2019 0947
Isopropylbenzene	50	51		1	102	70-130	12/03/2019 0947
Methyl acetate	50	49		1	99	70-130	12/03/2019 0947
Methyl tertiary butyl ether (MTBE)	50	48		1	95	70-130	12/03/2019 0947
4-Methyl-2-pentanone	100	96		1	96	70-130	12/03/2019 0947
Methylcyclohexane	50	50		1	101	70-130	12/03/2019 0947
Methylene chloride	50	42		1	84	70-130	12/03/2019 0947
Styrene	50	52		1	104	70-130	12/03/2019 0947
1,1,2,2-Tetrachloroethane	50	48		1	95	70-130	12/03/2019 0947
Tetrachloroethene	50	50		1	99	70-130	12/03/2019 0947
Toluene	50	50		1	100	70-130	12/03/2019 0947
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	94	70-130	12/03/2019 0947
1,2,4-Trichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,1,1-Trichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,1,2-Trichloroethane	50	48		1	96	70-130	12/03/2019 0947

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	12/03/2019 0947
Trichlorofluoromethane	50	42		1	84	70-130	12/03/2019 0947
Vinyl chloride	50	39		1	78	70-130	12/03/2019 0947
Xylenes (total)	100	100		1	102	70-130	12/03/2019 0947
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		96			70-130		
Bromofluorobenzene		103			70-130		
Toluene-d8		100			70-130		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37799-001

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/03/2019 2342
Benzene	ND		1	5.0	ug/kg	12/03/2019 2342
Bromodichloromethane	ND		1	5.0	ug/kg	12/03/2019 2342
Bromoform	ND		1	5.0	ug/kg	12/03/2019 2342
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/03/2019 2342
2-Butanone (MEK)	ND		1	20	ug/kg	12/03/2019 2342
Carbon disulfide	ND		1	5.0	ug/kg	12/03/2019 2342
Carbon tetrachloride	ND		1	5.0	ug/kg	12/03/2019 2342
Chlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
Chloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
Chloroform	ND		1	5.0	ug/kg	12/03/2019 2342
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/03/2019 2342
Cyclohexane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/03/2019 2342
Dibromochloromethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/03/2019 2342
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/03/2019 2342
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/03/2019 2342
Ethylbenzene	ND		1	5.0	ug/kg	12/03/2019 2342
2-Hexanone	ND		1	10	ug/kg	12/03/2019 2342
Isopropylbenzene	ND		1	5.0	ug/kg	12/03/2019 2342
Methyl acetate	ND		1	5.0	ug/kg	12/03/2019 2342
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/03/2019 2342
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/03/2019 2342
Methylcyclohexane	ND		1	5.0	ug/kg	12/03/2019 2342
Methylene chloride	ND		1	5.0	ug/kg	12/03/2019 2342
Styrene	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
Tetrachloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
Toluene	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37799-001

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/03/2019 2342
Vinyl chloride	ND		1	5.0	ug/kg	12/03/2019 2342
Xylenes (total)	ND		1	10	ug/kg	12/03/2019 2342
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4	92		53-142			
Bromofluorobenzene	98		47-138			
Toluene-d8	101		68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37799-002

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	107	60-140	12/03/2019 2319
Benzene	50	47		1	94	70-130	12/03/2019 2319
Bromodichloromethane	50	47		1	95	70-130	12/03/2019 2319
Bromoform	50	48		1	95	70-130	12/03/2019 2319
Bromomethane (Methyl bromide)	50	45		1	90	70-130	12/03/2019 2319
2-Butanone (MEK)	100	95		1	95	60-140	12/03/2019 2319
Carbon disulfide	50	47		1	94	70-130	12/03/2019 2319
Carbon tetrachloride	50	49		1	97	70-130	12/03/2019 2319
Chlorobenzene	50	48		1	96	70-130	12/03/2019 2319
Chloroethane	50	48		1	97	70-130	12/03/2019 2319
Chloroform	50	46		1	92	70-130	12/03/2019 2319
Chloromethane (Methyl chloride)	50	44		1	87	60-140	12/03/2019 2319
Cyclohexane	50	52		1	103	70-130	12/03/2019 2319
1,2-Dibromo-3-chloropropane (DBCP)	50	43		1	86	70-130	12/03/2019 2319
Dibromochloromethane	50	48		1	96	70-130	12/03/2019 2319
1,2-Dibromoethane (EDB)	50	47		1	94	70-130	12/03/2019 2319
1,2-Dichlorobenzene	50	48		1	96	70-130	12/03/2019 2319
1,3-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 2319
1,4-Dichlorobenzene	50	49		1	98	70-130	12/03/2019 2319
Dichlorodifluoromethane	50	47		1	95	60-140	12/03/2019 2319
1,1-Dichloroethane	50	46		1	92	70-130	12/03/2019 2319
1,2-Dichloroethane	50	46		1	92	70-130	12/03/2019 2319
1,1-Dichloroethene	50	56		1	111	70-130	12/03/2019 2319
cis-1,2-Dichloroethene	50	46		1	91	70-130	12/03/2019 2319
trans-1,2-Dichloroethene	50	50		1	101	70-130	12/03/2019 2319
1,2-Dichloropropane	50	47		1	94	70-130	12/03/2019 2319
cis-1,3-Dichloropropene	50	50		1	100	70-130	12/03/2019 2319
trans-1,3-Dichloropropene	50	51		1	102	70-130	12/03/2019 2319
Ethylbenzene	50	49		1	98	70-130	12/03/2019 2319
2-Hexanone	100	110		1	107	70-130	12/03/2019 2319
Isopropylbenzene	50	48		1	95	70-130	12/03/2019 2319
Methyl acetate	50	43		1	85	70-130	12/03/2019 2319
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	12/03/2019 2319
4-Methyl-2-pentanone	100	87		1	87	70-130	12/03/2019 2319
Methylcyclohexane	50	55		1	109	70-130	12/03/2019 2319
Methylene chloride	50	43		1	86	70-130	12/03/2019 2319
Styrene	50	49		1	97	70-130	12/03/2019 2319
1,1,2,2-Tetrachloroethane	50	46		1	91	70-130	12/03/2019 2319
Tetrachloroethene	50	50		1	100	70-130	12/03/2019 2319
Toluene	50	47		1	94	70-130	12/03/2019 2319
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	102	70-130	12/03/2019 2319
1,2,4-Trichlorobenzene	50	47		1	95	70-130	12/03/2019 2319
1,1,1-Trichloroethane	50	46		1	92	70-130	12/03/2019 2319
1,1,2-Trichloroethane	50	47		1	94	70-130	12/03/2019 2319

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37799-002

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	47		1	95	70-130	12/03/2019 2319
Trichlorofluoromethane	50	50		1	101	70-130	12/03/2019 2319
Vinyl chloride	50	43		1	87	70-130	12/03/2019 2319
Xylenes (total)	100	98		1	98	70-130	12/03/2019 2319
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		89	53-142				
Bromofluorobenzene		99	47-138				
Toluene-d8		104	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37838-001

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/04/2019 1015
Benzene	ND		1	5.0	ug/kg	12/04/2019 1015
Bromodichloromethane	ND		1	5.0	ug/kg	12/04/2019 1015
Bromoform	ND		1	5.0	ug/kg	12/04/2019 1015
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/04/2019 1015
2-Butanone (MEK)	ND		1	20	ug/kg	12/04/2019 1015
Carbon disulfide	ND		1	5.0	ug/kg	12/04/2019 1015
Carbon tetrachloride	ND		1	5.0	ug/kg	12/04/2019 1015
Chlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
Chloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
Chloroform	ND		1	5.0	ug/kg	12/04/2019 1015
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/04/2019 1015
Cyclohexane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/04/2019 1015
Dibromochloromethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/04/2019 1015
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/04/2019 1015
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/04/2019 1015
Ethylbenzene	ND		1	5.0	ug/kg	12/04/2019 1015
2-Hexanone	ND		1	10	ug/kg	12/04/2019 1015
Isopropylbenzene	ND		1	5.0	ug/kg	12/04/2019 1015
Methyl acetate	ND		1	5.0	ug/kg	12/04/2019 1015
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/04/2019 1015
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/04/2019 1015
Methylcyclohexane	ND		1	5.0	ug/kg	12/04/2019 1015
Methylene chloride	ND		1	5.0	ug/kg	12/04/2019 1015
Styrene	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
Tetrachloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
Toluene	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37838-001

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/04/2019 1015
Vinyl chloride	ND		1	5.0	ug/kg	12/04/2019 1015
Xylenes (total)	ND		1	10	ug/kg	12/04/2019 1015
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		91	53-142			
Bromofluorobenzene		101	47-138			
Toluene-d8		99	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37838-002

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	100	60-140	12/04/2019 0952
Benzene	50	47		1	94	70-130	12/04/2019 0952
Bromodichloromethane	50	48		1	97	70-130	12/04/2019 0952
Bromoform	50	49		1	99	70-130	12/04/2019 0952
Bromomethane (Methyl bromide)	50	48		1	97	70-130	12/04/2019 0952
2-Butanone (MEK)	100	94		1	94	60-140	12/04/2019 0952
Carbon disulfide	50	46		1	92	70-130	12/04/2019 0952
Carbon tetrachloride	50	47		1	93	70-130	12/04/2019 0952
Chlorobenzene	50	48		1	95	70-130	12/04/2019 0952
Chloroethane	50	52		1	104	70-130	12/04/2019 0952
Chloroform	50	47		1	94	70-130	12/04/2019 0952
Chloromethane (Methyl chloride)	50	48		1	97	60-140	12/04/2019 0952
Cyclohexane	50	47		1	94	70-130	12/04/2019 0952
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	92	70-130	12/04/2019 0952
Dibromochloromethane	50	49		1	97	70-130	12/04/2019 0952
1,2-Dibromoethane (EDB)	50	47		1	95	70-130	12/04/2019 0952
1,2-Dichlorobenzene	50	49		1	98	70-130	12/04/2019 0952
1,3-Dichlorobenzene	50	48		1	97	70-130	12/04/2019 0952
1,4-Dichlorobenzene	50	49		1	98	70-130	12/04/2019 0952
Dichlorodifluoromethane	50	50		1	99	60-140	12/04/2019 0952
1,1-Dichloroethane	50	47		1	93	70-130	12/04/2019 0952
1,2-Dichloroethane	50	46		1	92	70-130	12/04/2019 0952
1,1-Dichloroethene	50	53		1	106	70-130	12/04/2019 0952
cis-1,2-Dichloroethene	50	47		1	95	70-130	12/04/2019 0952
trans-1,2-Dichloroethene	50	50		1	100	70-130	12/04/2019 0952
1,2-Dichloropropane	50	48		1	97	70-130	12/04/2019 0952
cis-1,3-Dichloropropene	50	51		1	102	70-130	12/04/2019 0952
trans-1,3-Dichloropropene	50	50		1	101	70-130	12/04/2019 0952
Ethylbenzene	50	48		1	95	70-130	12/04/2019 0952
2-Hexanone	100	100		1	102	70-130	12/04/2019 0952
Isopropylbenzene	50	47		1	93	70-130	12/04/2019 0952
Methyl acetate	50	47		1	94	70-130	12/04/2019 0952
Methyl tertiary butyl ether (MTBE)	50	46		1	91	70-130	12/04/2019 0952
4-Methyl-2-pentanone	100	93		1	93	70-130	12/04/2019 0952
Methylcyclohexane	50	47		1	94	70-130	12/04/2019 0952
Methylene chloride	50	44		1	88	70-130	12/04/2019 0952
Styrene	50	48		1	96	70-130	12/04/2019 0952
1,1,2,2-Tetrachloroethane	50	47		1	93	70-130	12/04/2019 0952
Tetrachloroethene	50	48		1	95	70-130	12/04/2019 0952
Toluene	50	45		1	90	70-130	12/04/2019 0952
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	12/04/2019 0952
1,2,4-Trichlorobenzene	50	50		1	100	70-130	12/04/2019 0952
1,1,1-Trichloroethane	50	46		1	93	70-130	12/04/2019 0952
1,1,2-Trichloroethane	50	48		1	95	70-130	12/04/2019 0952

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37838-002

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	46		1	93	70-130	12/04/2019 0952
Trichlorofluoromethane	50	48		1	96	70-130	12/04/2019 0952
Vinyl chloride	50	45		1	90	70-130	12/04/2019 0952
Xylenes (total)	100	96		1	96	70-130	12/04/2019 0952
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		80	53-142				
Bromofluorobenzene		84	47-138				
Toluene-d8		82	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	110	320	N	1	287	70-130	12/04/2019 1745
Benzene	ND	55	57		1	103	70-130	12/04/2019 1745
Bromodichloromethane	ND	55	55		1	100	70-130	12/04/2019 1745
Bromoform	ND	55	56		1	101	70-130	12/04/2019 1745
Bromomethane (Methyl bromide)	ND	55	44		1	80	70-130	12/04/2019 1745
2-Butanone (MEK)	ND	110	68	N	1	62	70-130	12/04/2019 1745
Carbon disulfide	ND	55	59		1	108	70-130	12/04/2019 1745
Carbon tetrachloride	ND	55	60		1	109	70-130	12/04/2019 1745
Chlorobenzene	ND	55	59		1	108	70-130	12/04/2019 1745
Chloroethane	ND	55	50		1	90	70-130	12/04/2019 1745
Chloroform	ND	55	56		1	102	70-130	12/04/2019 1745
Chloromethane (Methyl chloride)	ND	55	44		1	80	60-140	12/04/2019 1745
Cyclohexane	ND	55	65		1	119	70-130	12/04/2019 1745
1,2-Dibromo-3-chloropropane (DBCP)	ND	55	67		1	121	70-130	12/04/2019 1745
Dibromochloromethane	ND	55	59		1	107	70-130	12/04/2019 1745
1,2-Dibromoethane (EDB)	ND	55	58		1	105	70-130	12/04/2019 1745
1,2-Dichlorobenzene	ND	55	63		1	114	70-130	12/04/2019 1745
1,3-Dichlorobenzene	ND	55	68		1	124	70-130	12/04/2019 1745
1,4-Dichlorobenzene	ND	55	68		1	124	70-130	12/04/2019 1745
Dichlorodifluoromethane	ND	55	49		1	90	60-140	12/04/2019 1745
1,1-Dichloroethane	ND	55	57		1	104	70-130	12/04/2019 1745
1,2-Dichloroethane	ND	55	53		1	96	70-130	12/04/2019 1745
1,1-Dichloroethene	ND	55	70		1	128	70-130	12/04/2019 1745
cis-1,2-Dichloroethene	ND	55	56		1	102	70-130	12/04/2019 1745
trans-1,2-Dichloroethene	ND	55	64		1	117	70-130	12/04/2019 1745
1,2-Dichloropropane	ND	55	56		1	101	70-130	12/04/2019 1745
cis-1,3-Dichloropropene	ND	55	56		1	102	70-130	12/04/2019 1745
trans-1,3-Dichloropropene	ND	55	62		1	112	70-130	12/04/2019 1745
Ethylbenzene	ND	55	62		1	113	70-130	12/04/2019 1745
2-Hexanone	ND	110	92		1	84	70-130	12/04/2019 1745
Isopropylbenzene	ND	55	59		1	107	70-130	12/04/2019 1745
Methyl acetate	ND	55	110	N	1	209	70-130	12/04/2019 1745
Methyl tertiary butyl ether (MTBE)	ND	55	52		1	94	70-130	12/04/2019 1745
4-Methyl-2-pentanone	ND	110	100		1	93	70-130	12/04/2019 1745
Methylcyclohexane	ND	55	65		1	118	70-130	12/04/2019 1745
Methylene chloride	ND	55	55		1	100	70-130	12/04/2019 1745
Styrene	ND	55	57		1	104	70-130	12/04/2019 1745
1,1,2,2-Tetrachloroethane	ND	55	71		1	130	70-130	12/04/2019 1745
Tetrachloroethene	ND	55	66		1	120	70-130	12/04/2019 1745
Toluene	ND	55	61		1	110	70-130	12/04/2019 1745
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	55	65		1	119	70-130	12/04/2019 1745
1,2,4-Trichlorobenzene	ND	55	43		1	79	70-130	12/04/2019 1745
1,1,1-Trichloroethane	ND	55	58		1	105	70-130	12/04/2019 1745
1,1,2-Trichloroethane	ND	55	58		1	105	70-130	12/04/2019 1745

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	55	57		1	104	70-130	12/04/2019 1745
Trichlorofluoromethane	ND	55	51		1	93	70-130	12/04/2019 1745
Vinyl chloride	ND	55	44		1	79	70-130	12/04/2019 1745
Xylenes (total)	ND	110	120		1	111	70-130	12/04/2019 1745
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		87	53-142					
Bromofluorobenzene		90	47-138					
Toluene-d8		110	68-124					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Volatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	100	290	N	1	278	10	70-130	20	12/04/2019 1808
Benzene	ND	51	50		1	98	12	70-130	20	12/04/2019 1808
Bromodichloromethane	ND	51	49		1	96	10	70-130	20	12/04/2019 1808
Bromoform	ND	51	50		1	98	10	70-130	20	12/04/2019 1808
Bromomethane (Methyl bromide)	ND	51	39		1	76	11	70-130	20	12/04/2019 1808
2-Butanone (MEK)	ND	100	63	N	1	61	8.8	70-130	20	12/04/2019 1808
Carbon disulfide	ND	51	51		1	100	15	70-130	20	12/04/2019 1808
Carbon tetrachloride	ND	51	53		1	102	13	70-130	20	12/04/2019 1808
Chlorobenzene	ND	51	51		1	99	15	70-130	20	12/04/2019 1808
Chloroethane	ND	51	43		1	83	15	70-130	20	12/04/2019 1808
Chloroform	ND	51	50		1	97	12	70-130	20	12/04/2019 1808
Chloromethane (Methyl chloride)	ND	51	37		1	73	16	60-140	20	12/04/2019 1808
Cyclohexane	ND	51	56		1	110	15	70-130	20	12/04/2019 1808
1,2-Dibromo-3-chloropropane (DBCP)	ND	51	59		1	115	12	70-130	20	12/04/2019 1808
Dibromochloromethane	ND	51	53		1	102	11	70-130	20	12/04/2019 1808
1,2-Dibromoethane (EDB)	ND	51	52		1	101	11	70-130	20	12/04/2019 1808
1,2-Dichlorobenzene	ND	51	55		1	107	13	70-130	20	12/04/2019 1808
1,3-Dichlorobenzene	ND	51	58		1	112	16	70-130	20	12/04/2019 1808
1,4-Dichlorobenzene	ND	51	57		1	112	17	70-130	20	12/04/2019 1808
Dichlorodifluoromethane	ND	51	41		1	80	18	60-140	20	12/04/2019 1808
1,1-Dichloroethane	ND	51	51		1	99	11	70-130	20	12/04/2019 1808
1,2-Dichloroethane	ND	51	48		1	94	9.4	70-130	20	12/04/2019 1808
1,1-Dichloroethene	ND	51	62		1	120	13	70-130	20	12/04/2019 1808
cis-1,2-Dichloroethene	ND	51	50		1	97	12	70-130	20	12/04/2019 1808
trans-1,2-Dichloroethene	ND	51	56		1	109	13	70-130	20	12/04/2019 1808
1,2-Dichloropropane	ND	51	50		1	97	11	70-130	20	12/04/2019 1808
cis-1,3-Dichloropropene	ND	51	51		1	100	8.6	70-130	20	12/04/2019 1808
trans-1,3-Dichloropropene	ND	51	54		1	106	13	70-130	20	12/04/2019 1808
Ethylbenzene	ND	51	53		1	104	15	70-130	20	12/04/2019 1808
2-Hexanone	ND	100	85		1	83	7.3	70-130	20	12/04/2019 1808
Isopropylbenzene	ND	51	51		1	98	15	70-130	20	12/04/2019 1808
Methyl acetate	ND	51	100	N	1	197	13	70-130	20	12/04/2019 1808
Methyl tertiary butyl ether (MTBE)	ND	51	46		1	91	11	70-130	20	12/04/2019 1808
4-Methyl-2-pentanone	ND	100	96		1	93	6.2	70-130	20	12/04/2019 1808
Methylcyclohexane	ND	51	55		1	107	17	70-130	20	12/04/2019 1808
Methylene chloride	ND	51	48		1	93	14	70-130	20	12/04/2019 1808
Styrene	ND	51	50		1	97	15	70-130	20	12/04/2019 1808
1,1,2,2-Tetrachloroethane	ND	51	64		1	124	11	70-130	20	12/04/2019 1808
Tetrachloroethene	ND	51	56		1	109	16	70-130	20	12/04/2019 1808
Toluene	ND	51	52		1	101	15	70-130	20	12/04/2019 1808
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	58		1	112	13	70-130	20	12/04/2019 1808
1,2,4-Trichlorobenzene	ND	51	39		1	76	11	70-130	20	12/04/2019 1808
1,1,1-Trichloroethane	ND	51	51		1	99	13	70-130	20	12/04/2019 1808
1,1,2-Trichloroethane	ND	51	51		1	100	12	70-130	20	12/04/2019 1808

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	ND	51	51		1	100	11	70-130	20	12/04/2019 1808	
Trichlorofluoromethane	ND	51	41	+	1	80	22	70-130	20	12/04/2019 1808	
Vinyl chloride	ND	51	37		1	72	17	70-130	20	12/04/2019 1808	
Xylenes (total)	ND	100	100		1	102	15	70-130	20	12/04/2019 1808	
Surrogate	Q	% Rec	Acceptance Limit								
1,2-Dichloroethane-d4		88	53-142								
Bromofluorobenzene		86	47-138								
Toluene-d8		107	68-124								

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38275-001

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/08/2019 1601
Benzene	ND		1	5.0	ug/kg	12/08/2019 1601
Bromodichloromethane	ND		1	5.0	ug/kg	12/08/2019 1601
Bromoform	ND		1	5.0	ug/kg	12/08/2019 1601
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/08/2019 1601
2-Butanone (MEK)	ND		1	20	ug/kg	12/08/2019 1601
Carbon disulfide	ND		1	5.0	ug/kg	12/08/2019 1601
Carbon tetrachloride	ND		1	5.0	ug/kg	12/08/2019 1601
Chlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
Chloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
Chloroform	ND		1	5.0	ug/kg	12/08/2019 1601
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/08/2019 1601
Cyclohexane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/08/2019 1601
Dibromochloromethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/08/2019 1601
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/08/2019 1601
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/08/2019 1601
Ethylbenzene	ND		1	5.0	ug/kg	12/08/2019 1601
2-Hexanone	ND		1	10	ug/kg	12/08/2019 1601
Isopropylbenzene	ND		1	5.0	ug/kg	12/08/2019 1601
Methyl acetate	ND		1	5.0	ug/kg	12/08/2019 1601
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/08/2019 1601
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/08/2019 1601
Methylcyclohexane	ND		1	5.0	ug/kg	12/08/2019 1601
Methylene chloride	ND		1	5.0	ug/kg	12/08/2019 1601
Styrene	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
Tetrachloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
Toluene	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38275-001

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/08/2019 1601
Vinyl chloride	ND		1	5.0	ug/kg	12/08/2019 1601
Xylenes (total)	ND		1	10	ug/kg	12/08/2019 1601
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		92	53-142			
Bromofluorobenzene		101	47-138			
Toluene-d8		102	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38275-002

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	89		1	89	60-140	12/08/2019 1514
Benzene	50	48		1	96	70-130	12/08/2019 1514
Bromodichloromethane	50	50		1	99	70-130	12/08/2019 1514
Bromoform	50	50		1	101	70-130	12/08/2019 1514
Bromomethane (Methyl bromide)	50	46		1	92	70-130	12/08/2019 1514
2-Butanone (MEK)	100	86		1	86	60-140	12/08/2019 1514
Carbon disulfide	50	41		1	83	70-130	12/08/2019 1514
Carbon tetrachloride	50	49		1	98	70-130	12/08/2019 1514
Chlorobenzene	50	49		1	98	70-130	12/08/2019 1514
Chloroethane	50	50		1	101	70-130	12/08/2019 1514
Chloroform	50	48		1	97	70-130	12/08/2019 1514
Chloromethane (Methyl chloride)	50	47		1	94	60-140	12/08/2019 1514
Cyclohexane	50	51		1	102	70-130	12/08/2019 1514
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	12/08/2019 1514
Dibromochloromethane	50	49		1	99	70-130	12/08/2019 1514
1,2-Dibromoethane (EDB)	50	49		1	98	70-130	12/08/2019 1514
1,2-Dichlorobenzene	50	50		1	100	70-130	12/08/2019 1514
1,3-Dichlorobenzene	50	49		1	99	70-130	12/08/2019 1514
1,4-Dichlorobenzene	50	50		1	100	70-130	12/08/2019 1514
Dichlorodifluoromethane	50	45		1	89	60-140	12/08/2019 1514
1,1-Dichloroethane	50	47		1	95	70-130	12/08/2019 1514
1,2-Dichloroethane	50	49		1	97	70-130	12/08/2019 1514
1,1-Dichloroethene	50	56		1	112	70-130	12/08/2019 1514
cis-1,2-Dichloroethene	50	49		1	99	70-130	12/08/2019 1514
trans-1,2-Dichloroethene	50	53		1	105	70-130	12/08/2019 1514
1,2-Dichloropropane	50	49		1	98	70-130	12/08/2019 1514
cis-1,3-Dichloropropene	50	52		1	104	70-130	12/08/2019 1514
trans-1,3-Dichloropropene	50	52		1	104	70-130	12/08/2019 1514
Ethylbenzene	50	49		1	98	70-130	12/08/2019 1514
2-Hexanone	100	97		1	97	70-130	12/08/2019 1514
Isopropylbenzene	50	49		1	97	70-130	12/08/2019 1514
Methyl acetate	50	48		1	96	70-130	12/08/2019 1514
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	12/08/2019 1514
4-Methyl-2-pentanone	100	98		1	98	70-130	12/08/2019 1514
Methylcyclohexane	50	52		1	104	70-130	12/08/2019 1514
Methylene chloride	50	45		1	89	70-130	12/08/2019 1514
Styrene	50	49		1	98	70-130	12/08/2019 1514
1,1,2,2-Tetrachloroethane	50	48		1	97	70-130	12/08/2019 1514
Tetrachloroethene	50	49		1	98	70-130	12/08/2019 1514
Toluene	50	46		1	91	70-130	12/08/2019 1514
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	101	70-130	12/08/2019 1514
1,2,4-Trichlorobenzene	50	52		1	103	70-130	12/08/2019 1514
1,1,1-Trichloroethane	50	47		1	94	70-130	12/08/2019 1514
1,1,2-Trichloroethane	50	48		1	96	70-130	12/08/2019 1514

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38275-002

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	97	70-130	12/08/2019 1514
Trichlorofluoromethane	50	47		1	94	70-130	12/08/2019 1514
Vinyl chloride	50	43		1	86	70-130	12/08/2019 1514
Xylenes (total)	100	99		1	99	70-130	12/08/2019 1514
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		93	53-142				
Bromofluorobenzene		104	47-138				
Toluene-d8		104	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ38275-003

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	90		1	90	1.3	60-140	20	12/08/2019 1537
Benzene	50	48		1	95	0.30	70-130	20	12/08/2019 1537
Bromodichloromethane	50	49		1	99	0.42	70-130	20	12/08/2019 1537
Bromoform	50	52		1	104	3.4	70-130	20	12/08/2019 1537
Bromomethane (Methyl bromide)	50	48		1	95	3.3	70-130	20	12/08/2019 1537
2-Butanone (MEK)	100	89		1	89	3.4	60-140	20	12/08/2019 1537
Carbon disulfide	50	42		1	84	1.6	70-130	20	12/08/2019 1537
Carbon tetrachloride	50	50		1	99	1.5	70-130	20	12/08/2019 1537
Chlorobenzene	50	48		1	97	0.96	70-130	20	12/08/2019 1537
Chloroethane	50	50		1	101	0.16	70-130	20	12/08/2019 1537
Chloroform	50	49		1	98	1.3	70-130	20	12/08/2019 1537
Chloromethane (Methyl chloride)	50	46		1	92	3.0	60-140	20	12/08/2019 1537
Cyclohexane	50	51		1	103	0.11	70-130	20	12/08/2019 1537
1,2-Dibromo-3-chloropropane (DBCP)	50	49		1	97	1.3	70-130	20	12/08/2019 1537
Dibromochloromethane	50	49		1	99	0.075	70-130	20	12/08/2019 1537
1,2-Dibromoethane (EDB)	50	49		1	99	0.79	70-130	20	12/08/2019 1537
1,2-Dichlorobenzene	50	49		1	98	1.5	70-130	20	12/08/2019 1537
1,3-Dichlorobenzene	50	49		1	97	1.1	70-130	20	12/08/2019 1537
1,4-Dichlorobenzene	50	49		1	98	1.4	70-130	20	12/08/2019 1537
Dichlorodifluoromethane	50	42		1	84	5.5	60-140	20	12/08/2019 1537
1,1-Dichloroethane	50	48		1	96	1.3	70-130	20	12/08/2019 1537
1,2-Dichloroethane	50	48		1	97	0.67	70-130	20	12/08/2019 1537
1,1-Dichloroethene	50	57		1	113	0.88	70-130	20	12/08/2019 1537
cis-1,2-Dichloroethene	50	50		1	101	1.8	70-130	20	12/08/2019 1537
trans-1,2-Dichloroethene	50	54		1	108	2.6	70-130	20	12/08/2019 1537
1,2-Dichloropropane	50	50		1	99	1.0	70-130	20	12/08/2019 1537
cis-1,3-Dichloropropene	50	52		1	104	0.28	70-130	20	12/08/2019 1537
trans-1,3-Dichloropropene	50	52		1	103	0.79	70-130	20	12/08/2019 1537
Ethylbenzene	50	49		1	98	0.32	70-130	20	12/08/2019 1537
2-Hexanone	100	97		1	97	0.16	70-130	20	12/08/2019 1537
Isopropylbenzene	50	48		1	96	1.3	70-130	20	12/08/2019 1537
Methyl acetate	50	51		1	102	6.4	70-130	20	12/08/2019 1537
Methyl tertiary butyl ether (MTBE)	50	48		1	96	2.1	70-130	20	12/08/2019 1537
4-Methyl-2-pentanone	100	100		1	102	4.3	70-130	20	12/08/2019 1537
Methylcyclohexane	50	52		1	104	0.023	70-130	20	12/08/2019 1537
Methylene chloride	50	47		1	94	4.8	70-130	20	12/08/2019 1537
Styrene	50	49		1	99	0.87	70-130	20	12/08/2019 1537
1,1,2,2-Tetrachloroethane	50	49		1	98	0.96	70-130	20	12/08/2019 1537
Tetrachloroethene	50	47		1	94	3.3	70-130	20	12/08/2019 1537
Toluene	50	45		1	90	1.0	70-130	20	12/08/2019 1537
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	49		1	98	2.6	70-130	20	12/08/2019 1537
1,2,4-Trichlorobenzene	50	50		1	101	2.6	70-130	20	12/08/2019 1537
1,1,1-Trichloroethane	50	48		1	96	2.2	70-130	20	12/08/2019 1537
1,1,2-Trichloroethane	50	48		1	96	0.23	70-130	20	12/08/2019 1537

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ38275-003

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	48		1	96	0.72	70-130	20	12/08/2019 1537
Trichlorofluoromethane	50	47		1	94	0.068	70-130	20	12/08/2019 1537
Vinyl chloride	50	43		1	87	0.90	70-130	20	12/08/2019 1537
Xylenes (total)	100	98		1	98	0.64	70-130	20	12/08/2019 1537
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		93	53-142						
Bromofluorobenzene		101	47-138						
Toluene-d8		99	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37989-001

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acenaphthene	ND		1	13	ug/kg	12/09/2019 1205
Acenaphthylene	ND		1	13	ug/kg	12/09/2019 1205
Acetophenone	ND		1	67	ug/kg	12/09/2019 1205
Anthracene	ND		1	13	ug/kg	12/09/2019 1205
Atrazine	ND		1	67	ug/kg	12/09/2019 1205
Benzaldehyde	ND		1	67	ug/kg	12/09/2019 1205
Benzo(a)anthracene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(a)pyrene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(b)fluoranthene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(g,h,i)perylene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(k)fluoranthene	ND		1	13	ug/kg	12/09/2019 1205
1,1'-Biphenyl	ND		1	67	ug/kg	12/09/2019 1205
4-Bromophenyl phenyl ether	ND		1	67	ug/kg	12/09/2019 1205
Butyl benzyl phthalate	ND		1	67	ug/kg	12/09/2019 1205
Caprolactam	ND		1	67	ug/kg	12/09/2019 1205
Carbazole	ND		1	67	ug/kg	12/09/2019 1205
bis (2-Chloro-1-methylethyl) ether	ND		1	67	ug/kg	12/09/2019 1205
4-Chloro-3-methyl phenol	ND		1	67	ug/kg	12/09/2019 1205
4-Chloroaniline	ND		1	67	ug/kg	12/09/2019 1205
bis(2-Chloroethoxy)methane	ND		1	67	ug/kg	12/09/2019 1205
bis(2-Chloroethyl)ether	ND		1	67	ug/kg	12/09/2019 1205
2-Chloronaphthalene	ND		1	67	ug/kg	12/09/2019 1205
2-Chlorophenol	ND		1	67	ug/kg	12/09/2019 1205
4-Chlorophenyl phenyl ether	ND		1	67	ug/kg	12/09/2019 1205
Chrysene	ND		1	13	ug/kg	12/09/2019 1205
Dibenzo(a,h)anthracene	ND		1	13	ug/kg	12/09/2019 1205
Dibenzofuran	ND		1	67	ug/kg	12/09/2019 1205
3,3'-Dichlorobenzidine	ND		1	67	ug/kg	12/09/2019 1205
2,4-Dichlorophenol	ND		1	67	ug/kg	12/09/2019 1205
Diethylphthalate	ND		1	67	ug/kg	12/09/2019 1205
Dimethyl phthalate	ND		1	67	ug/kg	12/09/2019 1205
2,4-Dimethylphenol	ND		1	67	ug/kg	12/09/2019 1205
Di-n-butyl phthalate	ND		1	67	ug/kg	12/09/2019 1205
4,6-Dinitro-2-methylphenol	ND		1	330	ug/kg	12/09/2019 1205
2,4-Dinitrophenol	ND		1	330	ug/kg	12/09/2019 1205
2,4-Dinitrotoluene	ND		1	130	ug/kg	12/09/2019 1205
2,6-Dinitrotoluene	ND		1	130	ug/kg	12/09/2019 1205
Di-n-octylphthalate	ND		1	67	ug/kg	12/09/2019 1205
bis(2-Ethylhexyl)phthalate	ND		1	67	ug/kg	12/09/2019 1205
Fluoranthene	ND		1	13	ug/kg	12/09/2019 1205
Fluorene	ND		1	13	ug/kg	12/09/2019 1205
Hexachlorobenzene	ND		1	67	ug/kg	12/09/2019 1205
Hexachlorobutadiene	ND		1	67	ug/kg	12/09/2019 1205
Hexachlorocyclopentadiene	ND		1	330	ug/kg	12/09/2019 1205

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37989-001

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Hexachloroethane	ND		1	67	ug/kg	12/09/2019 1205
Indeno(1,2,3-c,d)pyrene	ND		1	13	ug/kg	12/09/2019 1205
Isophorone	ND		1	67	ug/kg	12/09/2019 1205
2-Methylnaphthalene	ND		1	13	ug/kg	12/09/2019 1205
2-Methylphenol	ND		1	67	ug/kg	12/09/2019 1205
3+4-Methylphenol	ND		1	130	ug/kg	12/09/2019 1205
Naphthalene	ND		1	13	ug/kg	12/09/2019 1205
2-Nitroaniline	ND		1	130	ug/kg	12/09/2019 1205
3-Nitroaniline	ND		1	130	ug/kg	12/09/2019 1205
4-Nitroaniline	ND		1	130	ug/kg	12/09/2019 1205
Nitrobenzene	ND		1	67	ug/kg	12/09/2019 1205
2-Nitrophenol	ND		1	130	ug/kg	12/09/2019 1205
4-Nitrophenol	ND		1	330	ug/kg	12/09/2019 1205
N-Nitrosodi-n-propylamine	ND		1	67	ug/kg	12/09/2019 1205
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	ug/kg	12/09/2019 1205
Pentachlorophenol	ND		1	330	ug/kg	12/09/2019 1205
Phenanthrene	ND		1	13	ug/kg	12/09/2019 1205
Phenol	ND		1	67	ug/kg	12/09/2019 1205
Pyrene	ND		1	13	ug/kg	12/09/2019 1205
2,4,5-Trichlorophenol	ND		1	67	ug/kg	12/09/2019 1205
2,4,6-Trichlorophenol	ND		1	67	ug/kg	12/09/2019 1205

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		66	24-137
2-Fluorophenol		79	16-136
Nitrobenzene-d5		72	12-144
Phenol-d5		83	26-148
Terphenyl-d14		95	20-127
2,4,6-Tribromophenol		58	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37989-002

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	670	520		1	78	46-114	12/09/2019 1229
Acenaphthylene	670	550		1	83	44-122	12/09/2019 1229
Acetophenone	670	480		1	72	48-111	12/09/2019 1229
Anthracene	670	520		1	78	50-119	12/09/2019 1229
Atrazine	670	600		1	90	48-116	12/09/2019 1229
Benzaldehyde	670	330		1	49	10-110	12/09/2019 1229
Benzo(a)anthracene	670	570		1	86	47-121	12/09/2019 1229
Benzo(a)pyrene	670	600		1	90	55-134	12/09/2019 1229
Benzo(b)fluoranthene	670	560		1	83	28-139	12/09/2019 1229
Benzo(g,h,i)perylene	670	520		1	78	36-125	12/09/2019 1229
Benzo(k)fluoranthene	670	570		1	85	47-130	12/09/2019 1229
1,1'-Biphenyl	670	540		1	80	49-110	12/09/2019 1229
4-Bromophenyl phenyl ether	670	500		1	74	46-118	12/09/2019 1229
Butyl benzyl phthalate	670	500		1	74	46-128	12/09/2019 1229
Caprolactam	670	530		1	79	43-121	12/09/2019 1229
Carbazole	670	520		1	78	47-128	12/09/2019 1229
bis (2-Chloro-1-methylethyl) ether	670	460		1	70	31-102	12/09/2019 1229
4-Chloro-3-methyl phenol	670	490		1	73	49-118	12/09/2019 1229
4-Chloroaniline	670	320		1	48	17-106	12/09/2019 1229
bis(2-Chloroethoxy)methane	670	440		1	67	39-108	12/09/2019 1229
bis(2-Chloroethyl)ether	670	540		1	81	32-105	12/09/2019 1229
2-Chloronaphthalene	670	530		1	80	31-127	12/09/2019 1229
2-Chlorophenol	670	580		1	87	37-106	12/09/2019 1229
4-Chlorophenyl phenyl ether	670	580		1	87	47-116	12/09/2019 1229
Chrysene	670	560		1	85	45-126	12/09/2019 1229
Dibenzo(a,h)anthracene	670	550		1	83	45-122	12/09/2019 1229
Dibenzofuran	670	510		1	77	45-112	12/09/2019 1229
3,3'-Dichlorobenzidine	670	450		1	67	10-119	12/09/2019 1229
2,4-Dichlorophenol	670	540		1	80	41-113	12/09/2019 1229
Diethylphthalate	670	570		1	85	49-123	12/09/2019 1229
Dimethyl phthalate	670	540		1	81	48-120	12/09/2019 1229
2,4-Dimethylphenol	670	720		1	108	33-123	12/09/2019 1229
Di-n-butyl phthalate	670	500		1	75	51-129	12/09/2019 1229
4,6-Dinitro-2-methylphenol	670	460		1	69	40-130	12/09/2019 1229
2,4-Dinitrophenol	1300	860		1	65	10-113	12/09/2019 1229
2,4-Dinitrotoluene	670	590		1	88	48-124	12/09/2019 1229
2,6-Dinitrotoluene	670	530		1	79	47-125	12/09/2019 1229
Di-n-octylphthalate	670	540		1	81	49-142	12/09/2019 1229
bis(2-Ethylhexyl)phthalate	670	520		1	78	45-128	12/09/2019 1229
Fluoranthene	670	660		1	98	50-123	12/09/2019 1229
Fluorene	670	510		1	76	48-117	12/09/2019 1229
Hexachlorobenzene	670	510		1	77	44-122	12/09/2019 1229
Hexachlorobutadiene	670	550		1	82	33-103	12/09/2019 1229
Hexachlorocyclopentadiene	3300	2700		1	82	18-121	12/09/2019 1229

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37989-002

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	670	610		1	92	30-96	12/09/2019 1229
Indeno(1,2,3-c,d)pyrene	670	550		1	82	45-123	12/09/2019 1229
Isophorone	670	530		1	79	41-113	12/09/2019 1229
2-Methylnaphthalene	670	510		1	76	40-106	12/09/2019 1229
2-Methylphenol	670	660		1	100	32-107	12/09/2019 1229
3+4-Methylphenol	670	610		1	91	39-108	12/09/2019 1229
Naphthalene	670	470		1	70	36-110	12/09/2019 1229
2-Nitroaniline	670	590		1	88	45-123	12/09/2019 1229
3-Nitroaniline	670	480		1	72	24-127	12/09/2019 1229
4-Nitroaniline	670	670		1	100	48-127	12/09/2019 1229
Nitrobenzene	670	450		1	68	33-114	12/09/2019 1229
2-Nitrophenol	670	500		1	75	35-108	12/09/2019 1229
4-Nitrophenol	1300	1100		1	80	18-154	12/09/2019 1229
N-Nitrosodi-n-propylamine	670	580		1	87	32-115	12/09/2019 1229
N-Nitrosodiphenylamine (Diphenylamine)	670	480		1	72	53-150	12/09/2019 1229
Pentachlorophenol	1300	890		1	66	27-138	12/09/2019 1229
Phenanthrene	670	480		1	72	49-117	12/09/2019 1229
Phenol	670	580		1	87	36-108	12/09/2019 1229
Pyrene	670	540		1	81	47-119	12/09/2019 1229
2,4,5-Trichlorophenol	670	580		1	87	46-122	12/09/2019 1229
2,4,6-Trichlorophenol	670	580		1	87	38-115	12/09/2019 1229

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		78	24-137
2-Fluorophenol		77	16-136
Nitrobenzene-d5		71	12-144
Phenol-d5		87	26-148
Terphenyl-d14		88	20-127
2,4,6-Tribromophenol		72	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	660	270	N	5	41	46-114	12/11/2019 2210
Acenaphthylene	ND	660	310		5	48	44-122	12/11/2019 2210
Acetophenone	ND	660	420		5	63	48-111	12/11/2019 2210
Anthracene	ND	660	270	N	5	41	50-119	12/11/2019 2210
Atrazine	ND	660	320		5	49	48-116	12/11/2019 2210
Benzaldehyde	ND	660	440		5	66	10-110	12/11/2019 2210
Benzo(a)anthracene	ND	660	360		5	54	47-121	12/11/2019 2210
Benzo(a)pyrene	ND	660	380		5	57	55-134	12/11/2019 2210
Benzo(b)fluoranthene	ND	660	390		5	59	28-139	12/11/2019 2210
Benzo(g,h,i)perylene	ND	660	280		5	43	36-125	12/11/2019 2210
Benzo(k)fluoranthene	ND	660	350		5	54	47-130	12/11/2019 2210
1,1'-Biphenyl	ND	660	280	N	5	42	49-110	12/11/2019 2210
4-Bromophenyl phenyl ether	ND	660	270	N	5	42	46-118	12/11/2019 2210
Butyl benzyl phthalate	ND	660	350		5	52	46-128	12/11/2019 2210
Caprolactam	ND	660	320		5	48	43-121	12/11/2019 2210
Carbazole	ND	660	280	N	5	43	47-128	12/11/2019 2210
bis (2-Chloro-1-methylethyl) ether	ND	660	700	N	5	107	31-102	12/11/2019 2210
4-Chloro-3-methyl phenol	ND	660	330		5	51	49-118	12/11/2019 2210
4-Chloroaniline	ND	660	110	N	5	16	17-106	12/11/2019 2210
bis(2-Chloroethoxy)methane	ND	660	280		5	42	39-108	12/11/2019 2210
bis(2-Chloroethyl)ether	ND	660	290		5	44	32-105	12/11/2019 2210
2-Chloronaphthalene	ND	660	270		5	42	31-127	12/11/2019 2210
2-Chlorophenol	ND	660	370		5	57	37-106	12/11/2019 2210
4-Chlorophenyl phenyl ether	ND	660	330		5	50	47-116	12/11/2019 2210
Chrysene	ND	660	320		5	49	45-126	12/11/2019 2210
Dibenzo(a,h)anthracene	ND	660	310		5	47	45-122	12/11/2019 2210
Dibenzofuran	ND	660	320		5	48	45-112	12/11/2019 2210
3,3'-Dichlorobenzidine	ND	660	ND	N	5	0.00	10-119	12/11/2019 2210
2,4-Dichlorophenol	ND	660	310		5	48	41-113	12/11/2019 2210
Diethylphthalate	ND	660	290	N	5	44	49-123	12/11/2019 2210
Dimethyl phthalate	ND	660	340		5	52	48-120	12/11/2019 2210
2,4-Dimethylphenol	ND	660	400		5	61	33-123	12/11/2019 2210
Di-n-butyl phthalate	ND	660	280	N	5	42	51-129	12/11/2019 2210
4,6-Dinitro-2-methylphenol	ND	660	490		5	74	40-130	12/11/2019 2210
2,4-Dinitrophenol	ND	1300	1000		5	80	45-127	12/11/2019 2210
2,4-Dinitrotoluene	ND	660	280	N	5	43	48-124	12/11/2019 2210
2,6-Dinitrotoluene	ND	660	360		5	55	47-125	12/11/2019 2210
Di-n-octylphthalate	ND	660	370		5	57	49-142	12/11/2019 2210
bis(2-Ethylhexyl)phthalate	ND	660	340		5	51	45-128	12/11/2019 2210
Fluoranthene	ND	660	370		5	57	50-123	12/11/2019 2210
Fluorene	ND	660	270	N	5	41	48-117	12/11/2019 2210
Hexachlorobenzene	ND	660	260	N	5	40	44-122	12/11/2019 2210
Hexachlorobutadiene	ND	660	340		5	51	33-103	12/11/2019 2210
Hexachlorocyclopentadiene	ND	3300	2300		5	69	18-121	12/11/2019 2210

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	ND	660	340		5	51	30-96	12/11/2019 2210
Indeno(1,2,3-c,d)pyrene	ND	660	290	N	5	44	45-123	12/11/2019 2210
Isophorone	ND	660	310		5	47	41-113	12/11/2019 2210
2-Methylnaphthalene	ND	660	260		5	40	40-106	12/11/2019 2210
2-Methylphenol	ND	660	420		5	64	32-107	12/11/2019 2210
3+4-Methylphenol	ND	660	370		5	56	39-108	12/11/2019 2210
Naphthalene	ND	660	290		5	44	36-110	12/11/2019 2210
2-Nitroaniline	ND	660	260	N	5	39	45-123	12/11/2019 2210
3-Nitroaniline	ND	660	ND	N	5	0.00	24-127	12/11/2019 2210
4-Nitroaniline	ND	660	ND	N	5	0.00	48-127	12/11/2019 2210
Nitrobenzene	ND	660	300		5	45	33-114	12/11/2019 2210
2-Nitrophenol	ND	660	270		5	40	35-108	12/11/2019 2210
4-Nitrophenol	ND	1300	1300		5	101	18-154	12/11/2019 2210
N-Nitrosodi-n-propylamine	ND	660	400		5	61	32-115	12/11/2019 2210
N-Nitrosodiphenylamine (Diphenylamine)	ND	660	180	N	5	27	53-150	12/11/2019 2210
Pentachlorophenol	ND	1300	500		5	38	27-138	12/11/2019 2210
Phenanthrene	ND	660	290	N	5	44	49-117	12/11/2019 2210
Phenol	ND	660	330		5	50	36-108	12/11/2019 2210
Pyrene	ND	660	370		5	56	47-119	12/11/2019 2210
2,4,5-Trichlorophenol	ND	660	320		5	48	46-122	12/11/2019 2210
2,4,6-Trichlorophenol	ND	660	310		5	47	38-115	12/11/2019 2210

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		41	24-137
2-Fluorophenol		40	16-136
Nitrobenzene-d5		41	12-144
Phenol-d5		52	26-148
Terphenyl-d14		52	20-127
2,4,6-Tribromophenol		41	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	650	270	N	5	41	2.5	46-114	30	12/11/2019 2234
Acenaphthylene	ND	650	300		5	46	5.6	44-122	30	12/11/2019 2234
Acetophenone	ND	650	330		5	50	24	48-111	40	12/11/2019 2234
Anthracene	ND	650	280	N	5	43	4.7	50-119	30	12/11/2019 2234
Atrazine	ND	650	290	N	5	44	11	48-116	40	12/11/2019 2234
Benzaldehyde	ND	650	330		5	50	28	10-110	40	12/11/2019 2234
Benzo(a)anthracene	ND	650	360		5	55	0.23	47-121	30	12/11/2019 2234
Benzo(a)pyrene	ND	650	350	N	5	53	8.2	55-134	30	12/11/2019 2234
Benzo(b)fluoranthene	ND	650	370		5	57	3.8	28-139	30	12/11/2019 2234
Benzo(g,h,i)perylene	ND	650	270		5	41	5.1	36-125	30	12/11/2019 2234
Benzo(k)fluoranthene	ND	650	330		5	51	6.5	47-130	30	12/11/2019 2234
1,1'-Biphenyl	ND	650	280	N	5	42	1.4	49-110	40	12/11/2019 2234
4-Bromophenyl phenyl ether	ND	650	300		5	46	9.2	46-118	40	12/11/2019 2234
Butyl benzyl phthalate	ND	650	310		5	48	10	46-128	40	12/11/2019 2234
Caprolactam	ND	650	290		5	45	8.8	43-121	40	12/11/2019 2234
Carbazole	ND	650	300	N	5	45	4.4	47-128	40	12/11/2019 2234
bis (2-Chloro-1-methylethyl) ether	ND	650	430	+	5	67	47	31-102	40	12/11/2019 2234
4-Chloro-3-methyl phenol	ND	650	280	N	5	43	18	49-118	40	12/11/2019 2234
4-Chloroaniline	ND	650	120		5	19	13	17-106	40	12/11/2019 2234
bis(2-Chloroethoxy)methane	ND	650	230	N	5	36	18	39-108	40	12/11/2019 2234
bis(2-Chloroethyl)ether	ND	650	300		5	46	3.0	32-105	40	12/11/2019 2234
2-Chloronaphthalene	ND	650	290		5	45	6.8	31-127	40	12/11/2019 2234
2-Chlorophenol	ND	650	320		5	49	16	37-106	40	12/11/2019 2234
4-Chlorophenyl phenyl ether	ND	650	300		5	47	8.9	47-116	40	12/11/2019 2234
Chrysene	ND	650	350		5	55	8.9	45-126	30	12/11/2019 2234
Dibenzo(a,h)anthracene	ND	650	280	N	5	43	11	45-122	30	12/11/2019 2234
Dibenzofuran	ND	650	300		5	46	6.5	45-112	40	12/11/2019 2234
3,3'-Dichlorobenzidine	ND	650	ND	N	5	0.00	0.00	10-119	40	12/11/2019 2234
2,4-Dichlorophenol	ND	650	340		5	52	6.7	41-113	40	12/11/2019 2234
Diethylphthalate	ND	650	290	N	5	45	0.98	49-123	40	12/11/2019 2234
Dimethyl phthalate	ND	650	300	N	5	46	13	48-120	40	12/11/2019 2234
2,4-Dimethylphenol	ND	650	350		5	53	14	33-123	40	12/11/2019 2234
Di-n-butyl phthalate	ND	650	260	N	5	40	7.1	51-129	40	12/11/2019 2234
4,6-Dinitro-2-methylphenol	ND	650	530		5	81	8.0	40-130	40	12/11/2019 2234
2,4-Dinitrophenol	ND	1300	1100		5	85	4.7	45-127	40	12/11/2019 2234
2,4-Dinitrotoluene	ND	650	300	N	5	47	6.6	48-124	40	12/11/2019 2234
2,6-Dinitrotoluene	ND	650	360		5	55	1.9	47-125	40	12/11/2019 2234
Di-n-octylphthalate	ND	650	340		5	52	9.3	49-142	40	12/11/2019 2234
bis(2-Ethylhexyl)phthalate	ND	650	300		5	46	12	45-128	40	12/11/2019 2234
Fluoranthene	ND	650	330		5	50	14	50-123	30	12/11/2019 2234
Fluorene	ND	650	290	N	5	45	6.1	48-117	30	12/11/2019 2234
Hexachlorobenzene	ND	650	240	N	5	38	7.8	44-122	40	12/11/2019 2234
Hexachlorobutadiene	ND	650	280		5	44	17	33-103	40	12/11/2019 2234
Hexachlorocyclopentadiene	ND	3200	2200		5	68	2.7	18-121	40	12/11/2019 2234

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Hexachloroethane	ND	650	300		5	46	12	30-96	40	12/11/2019 2234
Indeno(1,2,3-c,d)pyrene	ND	650	300		5	46	3.3	45-123	30	12/11/2019 2234
Isophorone	ND	650	310		5	47	0.33	41-113	40	12/11/2019 2234
2-Methylnaphthalene	ND	650	300		5	46	12	40-106	30	12/11/2019 2234
2-Methylphenol	ND	650	330		5	51	23	32-107	40	12/11/2019 2234
3+4-Methylphenol	ND	650	350		5	55	3.9	39-108	40	12/11/2019 2234
Naphthalene	ND	650	290		5	45	2.6	36-110	30	12/11/2019 2234
2-Nitroaniline	ND	650	200	N	5	31	23	45-123	40	12/11/2019 2234
3-Nitroaniline	ND	650	ND	N	5	0.00	0.00	24-127	40	12/11/2019 2234
4-Nitroaniline	ND	650	ND	N	5	0.00	0.00	48-127	40	12/11/2019 2234
Nitrobenzene	ND	650	280		5	44	4.4	33-114	40	12/11/2019 2234
2-Nitrophenol	ND	650	320		5	49	18	35-108	40	12/11/2019 2234
4-Nitrophenol	ND	1300	1200		5	96	6.5	18-154	40	12/11/2019 2234
N-Nitrosodi-n-propylamine	ND	650	310		5	48	24	32-115	40	12/11/2019 2234
N-Nitrosodiphenylamine (Diphenylamine)	ND	650	170	N	5	27	3.1	53-150	40	12/11/2019 2234
Pentachlorophenol	ND	1300	440		5	34	13	27-138	40	12/11/2019 2234
Phenanthrene	ND	650	290	N	5	45	0.032	49-117	30	12/11/2019 2234
Phenol	ND	650	280		5	43	16	36-108	40	12/11/2019 2234
Pyrene	ND	650	340		5	52	8.0	47-119	30	12/11/2019 2234
2,4,5-Trichlorophenol	ND	650	300		5	46	6.7	46-122	40	12/11/2019 2234
2,4,6-Trichlorophenol	ND	650	300		5	47	2.3	38-115	40	12/11/2019 2234

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		38	24-137
2-Fluorophenol		38	16-136
Nitrobenzene-d5		38	12-144
Phenol-d5		48	26-148
Terphenyl-d14		50	20-127
2,4,6-Tribromophenol	N	25	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	ug/L	12/08/2019 0350
2,4,5-Trichlorophenol	ND		1	4.0	ug/L	12/08/2019 0350
2,4,6-Trichlorophenol	ND		1	4.0	ug/L	12/08/2019 0350
2,4-Dichlorophenol	ND		1	8.0	ug/L	12/08/2019 0350
2,4-Dimethylphenol	ND		1	4.0	ug/L	12/08/2019 0350
2,4-Dinitrophenol	ND		1	20	ug/L	12/08/2019 0350
2,4-Dinitrotoluene	ND		1	8.0	ug/L	12/08/2019 0350
2,6-Dinitrotoluene	ND		1	8.0	ug/L	12/08/2019 0350
2-Chloronaphthalene	ND		1	4.0	ug/L	12/08/2019 0350
2-Chlorophenol	ND		1	4.0	ug/L	12/08/2019 0350
2-Methylnaphthalene	ND		1	0.80	ug/L	12/08/2019 0350
2-Methylphenol	ND		1	4.0	ug/L	12/08/2019 0350
2-Nitroaniline	ND		1	8.0	ug/L	12/08/2019 0350
2-Nitrophenol	ND		1	4.0	ug/L	12/08/2019 0350
3,3'-Dichlorobenzidine	ND		1	4.0	ug/L	12/08/2019 0350
3+4-Methylphenol	ND		1	4.0	ug/L	12/08/2019 0350
3-Nitroaniline	ND		1	8.0	ug/L	12/08/2019 0350
4,6-Dinitro-2-methylphenol	ND		1	20	ug/L	12/08/2019 0350
4-Bromophenyl phenyl ether	ND		1	4.0	ug/L	12/08/2019 0350
4-Chloro-3-methyl phenol	ND		1	4.0	ug/L	12/08/2019 0350
4-Chloroaniline	ND		1	8.0	ug/L	12/08/2019 0350
4-Chlorophenyl phenyl ether	ND		1	4.0	ug/L	12/08/2019 0350
4-Nitroaniline	ND		1	8.0	ug/L	12/08/2019 0350
4-Nitrophenol	ND		1	20	ug/L	12/08/2019 0350
Acenaphthene	ND		1	0.80	ug/L	12/08/2019 0350
Acenaphthylene	ND		1	0.80	ug/L	12/08/2019 0350
Acetophenone	ND		1	4.0	ug/L	12/08/2019 0350
Anthracene	ND		1	0.80	ug/L	12/08/2019 0350
Atrazine	ND		1	4.0	ug/L	12/08/2019 0350
Benzaldehyde	ND		1	8.0	ug/L	12/08/2019 0350
Benzo(a)anthracene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(a)pyrene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(b)fluoranthene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(g,h,i)perylene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(k)fluoranthene	ND		1	0.80	ug/L	12/08/2019 0350
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	ug/L	12/08/2019 0350
bis(2-Chloroethoxy)methane	ND		1	4.0	ug/L	12/08/2019 0350
bis(2-Chloroethyl)ether	ND		1	4.0	ug/L	12/08/2019 0350
bis(2-Ethylhexyl)phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Butyl benzyl phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Caprolactam	ND		1	8.0	ug/L	12/08/2019 0350
Carbazole	ND		1	4.0	ug/L	12/08/2019 0350
Chrysene	ND		1	0.80	ug/L	12/08/2019 0350
Dibenzo(a,h)anthracene	ND		1	0.80	ug/L	12/08/2019 0350

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Dibenzofuran	ND		1	4.0	ug/L	12/08/2019 0350
Diethylphthalate	ND		1	4.0	ug/L	12/08/2019 0350
Dimethyl phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Di-n-butyl phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Di-n-octylphthalate	ND		1	4.0	ug/L	12/08/2019 0350
Fluoranthene	ND		1	0.80	ug/L	12/08/2019 0350
Fluorene	ND		1	0.80	ug/L	12/08/2019 0350
Hexachlorobenzene	ND		1	4.0	ug/L	12/08/2019 0350
Hexachlorobutadiene	ND		1	4.0	ug/L	12/08/2019 0350
Hexachlorocyclopentadiene	ND		1	20	ug/L	12/08/2019 0350
Hexachloroethane	ND		1	4.0	ug/L	12/08/2019 0350
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	ug/L	12/08/2019 0350
Isophorone	ND		1	4.0	ug/L	12/08/2019 0350
Naphthalene	ND		1	0.80	ug/L	12/08/2019 0350
Nitrobenzene	ND		1	4.0	ug/L	12/08/2019 0350
N-Nitrosodi-n-propylamine	ND		1	4.0	ug/L	12/08/2019 0350
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	ug/L	12/08/2019 0350
Pentachlorophenol	ND		1	20	ug/L	12/08/2019 0350
Phenanthrene	ND		1	0.80	ug/L	12/08/2019 0350
Phenol	ND		1	4.0	ug/L	12/08/2019 0350
Pyrene	ND		1	0.80	ug/L	12/08/2019 0350

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		88	37-129
2-Fluorophenol		52	24-127
Nitrobenzene-d5		92	38-127
Phenol-d5		78	28-128
Terphenyl-d14		114	10-148
2,4,6-Tribromophenol		80	35-144

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

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DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	35		1	87	30-130	12/08/2019 0415
2,4,5-Trichlorophenol	40	35		1	88	30-123	12/08/2019 0415
2,4,6-Trichlorophenol	40	36		1	90	30-130	12/08/2019 0415
2,4-Dichlorophenol	40	35		1	88	30-121	12/08/2019 0415
2,4-Dimethylphenol	40	34		1	86	20-125	12/08/2019 0415
2,4-Dinitrophenol	80	72		1	90	11-126	12/08/2019 0415
2,4-Dinitrotoluene	40	38		1	96	30-130	12/08/2019 0415
2,6-Dinitrotoluene	40	37		1	91	30-130	12/08/2019 0415
2-Chloronaphthalene	40	35		1	87	30-130	12/08/2019 0415
2-Chlorophenol	40	34		1	86	30-130	12/08/2019 0415
2-Methylnaphthalene	40	33		1	83	40-132	12/08/2019 0415
2-Methylphenol	40	35		1	88	30-130	12/08/2019 0415
2-Nitroaniline	40	40		1	101	30-130	12/08/2019 0415
2-Nitrophenol	40	36		1	89	30-130	12/08/2019 0415
3,3'-Dichlorobenzidine	40	28		1	70	10-126	12/08/2019 0415
3+4-Methylphenol	40	36		1	89	30-130	12/08/2019 0415
3-Nitroaniline	40	28		1	71	30-130	12/08/2019 0415
4,6-Dinitro-2-methylphenol	40	41		1	101	30-130	12/08/2019 0415
4-Bromophenyl phenyl ether	40	35		1	87	30-124	12/08/2019 0415
4-Chloro-3-methyl phenol	40	37		1	93	30-123	12/08/2019 0415
4-Chloroaniline	40	29		1	72	12-157	12/08/2019 0415
4-Chlorophenyl phenyl ether	40	35		1	87	30-121	12/08/2019 0415
4-Nitroaniline	40	38		1	96	30-135	12/08/2019 0415
4-Nitrophenol	80	75		1	94	30-130	12/08/2019 0415
Acenaphthene	40	36		1	89	30-122	12/08/2019 0415
Acenaphthylene	40	36		1	89	30-130	12/08/2019 0415
Acetophenone	40	36		1	90	30-130	12/08/2019 0415
Anthracene	40	37		1	91	30-123	12/08/2019 0415
Atrazine	40	37		1	92	30-130	12/08/2019 0415
Benzaldehyde	40	22		1	55	20-115	12/08/2019 0415
Benzo(a)anthracene	40	36		1	90	40-125	12/08/2019 0415
Benzo(a)pyrene	40	35		1	87	40-128	12/08/2019 0415
Benzo(b)fluoranthene	40	35		1	88	30-130	12/08/2019 0415
Benzo(g,h,i)perylene	40	36		1	89	30-130	12/08/2019 0415
Benzo(k)fluoranthene	40	35		1	87	30-130	12/08/2019 0415
bis (2-Chloro-1-methylethyl) ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Chloroethoxy)methane	40	36		1	90	30-130	12/08/2019 0415
bis(2-Chloroethyl)ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Ethylhexyl)phthalate	40	32		1	81	30-130	12/08/2019 0415
Butyl benzyl phthalate	40	39		1	97	30-130	12/08/2019 0415
Caprolactam	40	39		1	97	30-130	12/08/2019 0415
Carbazole	40	35		1	88	30-130	12/08/2019 0415
Chrysene	40	36		1	91	30-130	12/08/2019 0415
Dibenzo(a,h)anthracene	40	35		1	88	30-130	12/08/2019 0415

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	35		1	88	30-118	12/08/2019 0415
Diethylphthalate	40	37		1	93	40-125	12/08/2019 0415
Dimethyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-butyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-octylphthalate	40	30		1	75	30-130	12/08/2019 0415
Fluoranthene	40	36		1	89	40-128	12/08/2019 0415
Fluorene	40	36		1	89	30-124	12/08/2019 0415
Hexachlorobenzene	40	36		1	90	30-125	12/08/2019 0415
Hexachlorobutadiene	40	31		1	78	24-110	12/08/2019 0415
Hexachlorocyclopentadiene	200	150		1	73	22-122	12/08/2019 0415
Hexachloroethane	40	32		1	79	30-130	12/08/2019 0415
Indeno(1,2,3-c,d)pyrene	40	35		1	87	30-130	12/08/2019 0415
Isophorone	40	38		1	95	30-130	12/08/2019 0415
Naphthalene	40	34		1	84	30-130	12/08/2019 0415
Nitrobenzene	40	39		1	98	30-130	12/08/2019 0415
N-Nitrosodi-n-propylamine	40	38		1	94	30-130	12/08/2019 0415
N-Nitrosodiphenylamine (Diphenylamine)	40	36		1	89	30-123	12/08/2019 0415
Pentachlorophenol	80	65		1	81	30-130	12/08/2019 0415
Phenanthrene	40	36		1	90	40-123	12/08/2019 0415
Phenol	40	36		1	89	30-130	12/08/2019 0415
Pyrene	40	37		1	93	40-126	12/08/2019 0415

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		86	37-129
2-Fluorophenol		82	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		87	28-128
Terphenyl-d14		101	10-148
2,4,6-Tribromophenol		90	35-144

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

**Chain of Custody  
and  
Miscellaneous Documents**

# SHEALY ENVIRONMENTAL SERVICES, INC.

101499  
Number

**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**

Client: <u>Westinghouse</u> Address: <u>5801 Bluff Rd.</u> City: <u>Moncks</u> State: <u>SC</u> Zip Code: _____		Report to Contact: <u>Diana Joyner</u> Sampler's Signature: <u>[Signature]</u> Printed Name: <u>Diana Joyner</u>		Telephone No. / E-mail: <u>803 647 1426</u> Analysis (Attach list if more space is needed): _____		Quote No.: _____ Page <u>1</u> of <u>1</u>	
Project Name: <u>R.I. Implementation</u>		Project No.: _____ Date: _____		Matrix: _____ No. of Containers by Preservative Type:		Possible Hazard Identification:	
Project No: <u>00595649</u> Sample ID / Description: _____ (Containers for each sample may be combined on this line)		Matrix: _____ No. of Containers by Preservative Type:		Possible Hazard Identification:		Turn Around Time Required (Prior lab approval required for expedited TAT): <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispatch by Lab <input type="checkbox"/> Mon-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown	
SED-54 0-6" SED-54 6-12" SED-55 0-6" SED-55-MS 0-6" SED-55-MSD 0-6" SED-55 6-12" SED-56 0-6" SED-56-Dup 0-6" SED-56 6-12" EB-01-120219		Date: 12-2-19 Time: 1105 Date: 12-2-19 Time: 1110 Date: 12-2-19 Time: 1115 Date: 12-2-19 Time: 1115 Date: 12-2-19 Time: 1115 Date: 12-2-19 Time: 1120 Date: 12-2-19 Time: 1125 Date: 12-2-19 Time: 1125 Date: 12-2-19 Time: 1130 Date: 12-2-19 Time: 1235		Matrix: _____ No. of Containers by Preservative Type:		Possible Hazard Identification:	
1. Requisitioned by: <u>[Signature]</u> Date: 12-2-19 Time: 1418		2. Requisitioned by: _____ Date: _____ Time: _____		3. Requisitioned by: _____ Date: _____ Time: _____		4. Requisitioned by: _____ Date: _____ Time: _____	
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"/> Yes <input type="checkbox"/> No Receptal Temp: <u>1-3</u> °C		Date: 12-19 Time: 1418		Date: _____ Time: _____	

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Final/Client Copy  
 Document Number: F-AD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: ME0018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: WESTINGHOUSE Cooler Inspected by/date: MEC / 12/2/19 Lot #: UL02023

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>19-2044</u> <u>1.3 / 1.3 °C</u> <u>NA / NA °C</u> <u>NA / NA °C</u> <u>NA / NA °C</u>	
Method: <input checked="" type="checkbox"/> Temperature Blank <input 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # 22261
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH using SR # <u>NA</u> . Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Sample(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> ) with Shealy ID: <u>NA</u> .	
SR barcode labels applied by: <u>MEC/JSH</u> Date: <u>12/2/19</u>	

Comments:

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# SHEALY ENVIRONMENTAL SERVICES, INC.

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## Report of Analysis

### Westinghouse Electric Company

5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: RI Implementation

Project Number: 60595649

Lot Number: **UL02023**

Date Completed: 12/12/2019



12/12/2019 1:56 PM

Approved and released by:  
Project Manager: Grant Wilton



The electronic signature above is the equivalent of a handwritten signature.  
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# SHEALY ENVIRONMENTAL SERVICES, INC.

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: UL02023

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.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

### Semivolatile Organic Analysis – Method 8270D

Sample -001 thru -007: The samples were analyzed at a 5X dilution due to the high concentration of non-target analytes present. The reporting limits were raised accordingly.

Sample -002: The surrogate, 2,4,6-Tribromophenol, was recovered below control limits due to matrix interference.

# SHEALY ENVIRONMENTAL SERVICES, INC.

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Sample Summary  
Westinghouse Electric Company  
Lot Number: UL02023  
Project Name: RI Implementation  
Project Number: 60595649

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-54 0"-6"	Solid	12/02/2019 1105	12/02/2019
002	SED-54 6"-12"	Solid	12/02/2019 1110	12/02/2019
003	SED-55 0"-6"	Solid	12/02/2019 1115	12/02/2019
004	SED-55 6"-12"	Solid	12/02/2019 1120	12/02/2019
005	SED-56 0"-6"	Solid	12/02/2019 1125	12/02/2019
006	SED-56 0"-6" DUP	Solid	12/02/2019 1125	12/02/2019
007	SED-56 6"-12"	Solid	12/02/2019 1130	12/02/2019
008	EB-01-120219	Aqueous	12/02/2019 1235	12/02/2019
009	TB-01-120219	Aqueous	12/02/2019	12/02/2019

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(9 samples)

# SHEALY ENVIRONMENTAL SERVICES, INC.

Detection Summary  
Westinghouse Electric Company  
Lot Number: UL02023  
Project Name: RI Implementation  
Project Number: 60595649

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-54 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.63		mg/kg	6
001	SED-54 0"-6"	Solid	Acetone	8260B	330		ug/kg	7
001	SED-54 0"-6"	Solid	2-Butanone (MEK)	8260B	42		ug/kg	7
001	SED-54 0"-6"	Solid	Methyl acetate	8260B	12		ug/kg	7
002	SED-54 6"-12"	Solid	Nitrate - N (soluble)	9056A	0.68		mg/kg	11
002	SED-54 6"-12"	Solid	Acetone	8260B	39		ug/kg	12
004	SED-55 6"-12"	Solid	Acetone	8260B	200		ug/kg	22
005	SED-56 0"-6"	Solid	Nitrate - N (soluble)	9056A	0.52		mg/kg	26
005	SED-56 0"-6"	Solid	Acetone	8260B	220		ug/kg	27
006	SED-56 0"-6" DUP	Solid	Nitrate - N (soluble)	9056A	0.74		mg/kg	31
006	SED-56 0"-6" DUP	Solid	Acetone	8260B	23		ug/kg	32

(11 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-001
Description: SED-54 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1105	% Solids: 23.1 12/02/2019 2318
Date Received: 12/02/2019	Project Name: RI Implementation
	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1522	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.63		0.50	mg/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-001
Description: SED-54 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1105	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 23.1 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0430	ALR1		37799	3.78

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	330		26	ug/kg	1
Benzene	71-43-2	8260B	ND		6.6	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.6	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.6	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.6	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	42		26	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.6	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.6	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.6	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.6	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.6	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.6	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.6	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.6	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.6	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.6	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.6	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.6	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.6	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.6	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.6	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.6	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.6	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.6	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.6	ug/kg	1
Methyl acetate	79-20-9	8260B	12		6.6	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.6	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.6	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.6	ug/kg	1
Styrene	100-42-5	8260B	ND		6.6	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.6	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.6	ug/kg	1
Toluene	108-88-3	8260B	ND		6.6	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.6	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.6	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.6	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.6	ug/kg	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-001
Description: SED-54 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1105	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 23.1 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0430	ALR1		37799	3.78

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.6	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.6	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		79	47-138
Toluene-d8		117	68-124

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-001
Description: SED-54 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1105	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 23.1 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1927	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		630	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		630	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-001
Description: SED-54 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1105	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 23.1 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1927	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		630	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		630	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		630	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		630	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		630	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		48	24-137
2-Fluorophenol		53	16-136
Nitrobenzene-d5		49	12-144
Phenol-d5		57	26-148
Terphenyl-d14		63	20-127
2,4,6-Tribromophenol		42	27-128

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 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-002
Description: SED-54 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1110	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
% Solids: 33.7 12/02/2019 2318	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1545	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.68		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-002
Description: SED-54 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1110	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 33.7 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0452	ALR1		37799	3.95

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	39		25	ug/kg	1
Benzene	71-43-2	8260B	ND		6.3	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		6.3	ug/kg	1
Bromoform	75-25-2	8260B	ND		6.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		6.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		25	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		6.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		6.3	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		6.3	ug/kg	1
Chloroethane	75-00-3	8260B	ND		6.3	ug/kg	1
Chloroform	67-66-3	8260B	ND		6.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		6.3	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		6.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		6.3	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		6.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		6.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		6.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		6.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		6.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		6.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		6.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		6.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		6.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		6.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		6.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		6.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		6.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		6.3	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		6.3	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		13	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		6.3	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		6.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		6.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		13	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		6.3	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		6.3	ug/kg	1
Styrene	100-42-5	8260B	ND		6.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		6.3	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		6.3	ug/kg	1
Toluene	108-88-3	8260B	ND		6.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		6.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		6.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		6.3	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		6.3	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-002
Description: SED-54 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1110	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
	% Solids: 33.7 12/02/2019 2318

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0452	ALR1		37799	3.95

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		6.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		6.3	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		6.3	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		13	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	53-142
Bromofluorobenzene		85	47-138
Toluene-d8		110	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-002
Description: SED-54 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1110	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 33.7 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1950	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		63	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		63	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		63	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		63	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		63	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		63	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		63	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		63	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		63	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		63	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		620	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		620	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		63	ug/kg	1
Fluorene	86-73-7	8270D	ND		63	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-002
Description: SED-54 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1110	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 33.7 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 1950	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		63	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		63	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		620	ug/kg	1
Naphthalene	91-20-3	8270D	ND		63	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		620	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		620	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		620	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		620	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		63	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		63	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		37	24-137
2-Fluorophenol		37	16-136
Nitrobenzene-d5		36	12-144
Phenol-d5		35	26-148
Terphenyl-d14		48	20-127
2,4,6-Tribromophenol	N	22	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-003
Description: SED-55 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1115	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
% Solids: 53.5 12/02/2019 2318	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1606	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-003
Description: SED-55 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1115	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 53.5 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1228	JM1		37838	5.13

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		19	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	ug/kg	1
Styrene	100-42-5	8260B	ND		4.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-003
Description: SED-55 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1115	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 53.5 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1228	JM1		37838	5.13

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		86	47-138
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-003
Description: SED-55 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1115	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 53.5 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2013	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		64	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		64	ug/kg	1
Acetophenone	98-86-2	8270D	ND		320	ug/kg	1
Anthracene	120-12-7	8270D	ND		64	ug/kg	1
Atrazine	1912-24-9	8270D	ND		320	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		320	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		64	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		64	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		64	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		64	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		64	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		320	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		320	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		320	ug/kg	1
Caprolactam	105-60-2	8270D	ND		320	ug/kg	1
Carbazole	86-74-8	8270D	ND		320	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		320	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		320	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		320	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		320	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		320	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		320	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		320	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		320	ug/kg	1
Chrysene	218-01-9	8270D	ND		64	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		64	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		320	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		320	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		320	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		320	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		320	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		320	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		320	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		630	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		630	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		320	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		320	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		64	ug/kg	1
Fluorene	86-73-7	8270D	ND		64	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		320	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		320	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-003
Description: SED-55 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1115	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 53.5 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2013	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		320	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		64	ug/kg	1
Isophorone	78-59-1	8270D	ND		320	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		64	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		320	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		630	ug/kg	1
Naphthalene	91-20-3	8270D	ND		64	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		630	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		630	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		630	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		320	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		630	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		320	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		320	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		64	ug/kg	1
Phenol	108-95-2	8270D	ND		320	ug/kg	1
Pyrene	129-00-0	8270D	ND		64	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		320	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		320	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		44	24-137
2-Fluorophenol		32	16-136
Nitrobenzene-d5		47	12-144
Phenol-d5		43	26-148
Terphenyl-d14		56	20-127
2,4,6-Tribromophenol		43	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-004
Description: SED-55 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1120	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
% Solids: 61.4 12/02/2019 2318	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1710	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-004
Description: SED-55 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1120	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 61.4 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0515	ALR1		37799	5.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	200		20	ug/kg	1
Benzene	71-43-2	8260B	ND		4.9	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.9	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		20	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.9	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.9	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.9	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.9	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.9	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.9	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.9	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.8	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.9	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.8	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.9	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.9	ug/kg	1
Styrene	100-42-5	8260B	ND		4.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.9	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.9	ug/kg	1
Toluene	108-88-3	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.9	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.9	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-004
Description: SED-55 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1120	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
	% Solids: 61.4 12/02/2019 2318

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 0515	ALR1		37799	5.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.9	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.9	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		88	53-142
Bromofluorobenzene		93	47-138
Toluene-d8		103	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-004
Description: SED-55 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1120	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 61.4 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2037	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-004
Description: SED-55 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1120	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 61.4 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2037	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		43	24-137
2-Fluorophenol		40	16-136
Nitrobenzene-d5		48	12-144
Phenol-d5		41	26-148
Terphenyl-d14		56	20-127
2,4,6-Tribromophenol		37	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-005
Description: SED-56 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
% Solids: 49.9 12/02/2019 2318	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1731	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.52		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-005
Description: SED-56 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 49.9 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1337	JM1		37838	4.79

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	220		21	ug/kg	1
Benzene	71-43-2	8260B	ND		5.2	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		5.2	ug/kg	1
Bromoform	75-25-2	8260B	ND		5.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		5.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		21	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		5.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		5.2	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		5.2	ug/kg	1
Chloroethane	75-00-3	8260B	ND		5.2	ug/kg	1
Chloroform	67-66-3	8260B	ND		5.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		5.2	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		5.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		5.2	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		5.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		5.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		5.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		5.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		5.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		5.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		5.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		5.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		5.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		5.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		5.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		5.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		5.2	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		5.2	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		10	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		5.2	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		5.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		5.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		5.2	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		5.2	ug/kg	1
Styrene	100-42-5	8260B	ND		5.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		5.2	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		5.2	ug/kg	1
Toluene	108-88-3	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		5.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		5.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		5.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		5.2	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-005
Description: SED-56 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 49.9 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1337	JM1		37838	4.79

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		5.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		5.2	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		5.2	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		10	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	53-142
Bromofluorobenzene		85	47-138
Toluene-d8		114	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-005
Description: SED-56 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 49.9 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2100	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		66	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		66	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		66	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		66	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		66	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		66	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		66	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		66	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		66	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		66	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		66	ug/kg	1
Fluorene	86-73-7	8270D	ND		66	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-005
Description: SED-56 0"-6"	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 49.9 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2100	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		66	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		66	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		66	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		66	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		66	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		41	24-137
2-Fluorophenol		64	16-136
Nitrobenzene-d5		43	12-144
Phenol-d5		54	26-148
Terphenyl-d14		64	20-127
2,4,6-Tribromophenol		28	27-128

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 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-006
Description: SED-56 0"-6" DUP	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
	% Solids: 52.4 12/02/2019 2318

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1834	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	0.74		0.50	mg/kg	1

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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-006
Description: SED-56 0"-6" DUP	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 52.4 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1251	JM1		37838	5.18

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	23		19	ug/kg	1
Benzene	71-43-2	8260B	ND		4.8	ug/kg	1
Bromodichloromethane	75-27-4	8260B	ND		4.8	ug/kg	1
Bromoform	75-25-2	8260B	ND		4.8	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		4.8	ug/kg	1
2-Butanone (MEK)	78-93-3	8260B	ND		19	ug/kg	1
Carbon disulfide	75-15-0	8260B	ND		4.8	ug/kg	1
Carbon tetrachloride	56-23-5	8260B	ND		4.8	ug/kg	1
Chlorobenzene	108-90-7	8260B	ND		4.8	ug/kg	1
Chloroethane	75-00-3	8260B	ND		4.8	ug/kg	1
Chloroform	67-66-3	8260B	ND		4.8	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		4.8	ug/kg	1
Cyclohexane	110-82-7	8260B	ND		4.8	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		4.8	ug/kg	1
Dibromochloromethane	124-48-1	8260B	ND		4.8	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		4.8	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260B	ND		4.8	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260B	ND		4.8	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260B	ND		4.8	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethane	75-34-3	8260B	ND		4.8	ug/kg	1
1,2-Dichloroethane	107-06-2	8260B	ND		4.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260B	ND		4.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260B	ND		4.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260B	ND		4.8	ug/kg	1
1,2-Dichloropropane	78-87-5	8260B	ND		4.8	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		4.8	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		4.8	ug/kg	1
Ethylbenzene	100-41-4	8260B	ND		4.8	ug/kg	1
2-Hexanone	591-78-6	8260B	ND		9.7	ug/kg	1
Isopropylbenzene	98-82-8	8260B	ND		4.8	ug/kg	1
Methyl acetate	79-20-9	8260B	ND		4.8	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		4.8	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		9.7	ug/kg	1
Methylcyclohexane	108-87-2	8260B	ND		4.8	ug/kg	1
Methylene chloride	75-09-2	8260B	ND		4.8	ug/kg	1
Styrene	100-42-5	8260B	ND		4.8	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		4.8	ug/kg	1
Tetrachloroethene	127-18-4	8260B	ND		4.8	ug/kg	1
Toluene	108-88-3	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		4.8	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		4.8	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260B	ND		4.8	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260B	ND		4.8	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-006
Description: SED-56 0"-6" DUP	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 52.4 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260B	1	12/04/2019 1251	JM1		37838	5.18

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		4.8	ug/kg	1
Trichlorofluoromethane	75-69-4	8260B	ND		4.8	ug/kg	1
Vinyl chloride	75-01-4	8260B	ND		4.8	ug/kg	1
Xylenes (total)	1330-20-7	8260B	ND		9.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		87	53-142
Bromofluorobenzene		84	47-138
Toluene-d8		110	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-006
Description: SED-56 0"-6" DUP	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 52.4 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2123	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		65	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		65	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		65	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		65	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		65	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		65	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		65	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		65	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		65	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		65	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		65	ug/kg	1
Fluorene	86-73-7	8270D	ND		65	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-006
Description: SED-56 0"-6" DUP	Matrix: Solid
Date Sampled: 12/02/2019 1125	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 52.4 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2123	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		65	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		65	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		65	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		65	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		65	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		43	24-137
2-Fluorophenol		59	16-136
Nitrobenzene-d5		43	12-144
Phenol-d5		46	26-148
Terphenyl-d14		57	20-127
2,4,6-Tribromophenol		41	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-007
Description: SED-56 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1130	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
% Solids: 62.6 12/02/2019 2318	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	12/10/2019 1855	GMH		38611

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-007
Description: SED-56 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1130	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 62.6 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/08/2019 2151	ALR1		38275	7.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		14	ug/kg	2
Benzene	71-43-2	8260B	ND		3.5	ug/kg	2
Bromodichloromethane	75-27-4	8260B	ND		3.5	ug/kg	2
Bromoform	75-25-2	8260B	ND		3.5	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260B	ND		3.5	ug/kg	2
2-Butanone (MEK)	78-93-3	8260B	ND		14	ug/kg	2
Carbon disulfide	75-15-0	8260B	ND		3.5	ug/kg	2
Carbon tetrachloride	56-23-5	8260B	ND		3.5	ug/kg	2
Chlorobenzene	108-90-7	8260B	ND		3.5	ug/kg	2
Chloroethane	75-00-3	8260B	ND		3.5	ug/kg	2
Chloroform	67-66-3	8260B	ND		3.5	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260B	ND		3.5	ug/kg	2
Cyclohexane	110-82-7	8260B	ND		3.5	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260B	ND		3.5	ug/kg	2
Dibromochloromethane	124-48-1	8260B	ND		3.5	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260B	ND		3.5	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260B	ND		3.5	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260B	ND		3.5	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260B	ND		3.5	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260B	ND		3.5	ug/kg	2
1,1-Dichloroethane	75-34-3	8260B	ND		3.5	ug/kg	2
1,2-Dichloroethane	107-06-2	8260B	ND		3.5	ug/kg	2
1,1-Dichloroethene	75-35-4	8260B	ND		3.5	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260B	ND		3.5	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260B	ND		3.5	ug/kg	2
1,2-Dichloropropane	78-87-5	8260B	ND		3.5	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260B	ND		3.5	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260B	ND		3.5	ug/kg	2
Ethylbenzene	100-41-4	8260B	ND		3.5	ug/kg	2
2-Hexanone	591-78-6	8260B	ND		7.1	ug/kg	2
Isopropylbenzene	98-82-8	8260B	ND		3.5	ug/kg	2
Methyl acetate	79-20-9	8260B	ND		3.5	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		3.5	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260B	ND		7.1	ug/kg	2
Methylcyclohexane	108-87-2	8260B	ND		3.5	ug/kg	2
Methylene chloride	75-09-2	8260B	ND		3.5	ug/kg	2
Styrene	100-42-5	8260B	ND		3.5	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260B	ND		3.5	ug/kg	2
Tetrachloroethene	127-18-4	8260B	ND		3.5	ug/kg	2
Toluene	108-88-3	8260B	ND		3.5	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		3.5	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260B	ND		3.5	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260B	ND		3.5	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260B	ND		3.5	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-007
Description: SED-56 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1130	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649
	% Solids: 62.6 12/02/2019 2318

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260B	1	12/08/2019 2151	ALR1		38275	7.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		3.5	ug/kg	2
Trichlorofluoromethane	75-69-4	8260B	ND		3.5	ug/kg	2
Vinyl chloride	75-01-4	8260B	ND		3.5	ug/kg	2
Xylenes (total)	1330-20-7	8260B	ND		7.1	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
1,2-Dichloroethane-d4		90	53-142
Bromofluorobenzene		97	47-138
Toluene-d8		107	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-007
Description: SED-56 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1130	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 62.6 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2147	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acenaphthene	83-32-9	8270D	ND		66	ug/kg	1
Acenaphthylene	208-96-8	8270D	ND		66	ug/kg	1
Acetophenone	98-86-2	8270D	ND		330	ug/kg	1
Anthracene	120-12-7	8270D	ND		66	ug/kg	1
Atrazine	1912-24-9	8270D	ND		330	ug/kg	1
Benzaldehyde	100-52-7	8270D	ND		330	ug/kg	1
Benzo(a)anthracene	56-55-3	8270D	ND		66	ug/kg	1
Benzo(a)pyrene	50-32-8	8270D	ND		66	ug/kg	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		66	ug/kg	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		66	ug/kg	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		66	ug/kg	1
1,1'-Biphenyl	92-52-4	8270D	ND		330	ug/kg	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		330	ug/kg	1
Butyl benzyl phthalate	85-68-7	8270D	ND		330	ug/kg	1
Caprolactam	105-60-2	8270D	ND		330	ug/kg	1
Carbazole	86-74-8	8270D	ND		330	ug/kg	1
bis(2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		330	ug/kg	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		330	ug/kg	1
4-Chloroaniline	106-47-8	8270D	ND		330	ug/kg	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		330	ug/kg	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		330	ug/kg	1
2-Chloronaphthalene	91-58-7	8270D	ND		330	ug/kg	1
2-Chlorophenol	95-57-8	8270D	ND		330	ug/kg	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		330	ug/kg	1
Chrysene	218-01-9	8270D	ND		66	ug/kg	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		66	ug/kg	1
Dibenzofuran	132-64-9	8270D	ND		330	ug/kg	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		330	ug/kg	1
2,4-Dichlorophenol	120-83-2	8270D	ND		330	ug/kg	1
Diethylphthalate	84-66-2	8270D	ND		330	ug/kg	1
Dimethyl phthalate	131-11-3	8270D	ND		330	ug/kg	1
2,4-Dimethylphenol	105-67-9	8270D	ND		330	ug/kg	1
Di-n-butyl phthalate	84-74-2	8270D	ND		330	ug/kg	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		1600	ug/kg	1
2,4-Dinitrophenol	51-28-5	8270D	ND		1600	ug/kg	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		640	ug/kg	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		640	ug/kg	1
Di-n-octylphthalate	117-84-0	8270D	ND		330	ug/kg	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		330	ug/kg	1
Fluoranthene	206-44-0	8270D	ND		66	ug/kg	1
Fluorene	86-73-7	8270D	ND		66	ug/kg	1
Hexachlorobenzene	118-74-1	8270D	ND		330	ug/kg	1
Hexachlorobutadiene	87-68-3	8270D	ND		330	ug/kg	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		1600	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-007
Description: SED-56 6"-12"	Matrix: Solid
Date Sampled: 12/02/2019 1130	Project Name: RI Implementation
Date Received: 12/02/2019	% Solids: 62.6 12/02/2019 2318
Project Number: 60595649	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3546	8270D	5	12/11/2019 2147	JCG	12/05/2019 1305	37989

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Hexachloroethane	67-72-1	8270D	ND		330	ug/kg	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		66	ug/kg	1
Isophorone	78-59-1	8270D	ND		330	ug/kg	1
2-Methylnaphthalene	91-57-6	8270D	ND		66	ug/kg	1
2-Methylphenol	95-48-7	8270D	ND		330	ug/kg	1
3+4-Methylphenol	106-44-5	8270D	ND		640	ug/kg	1
Naphthalene	91-20-3	8270D	ND		66	ug/kg	1
2-Nitroaniline	88-74-4	8270D	ND		640	ug/kg	1
3-Nitroaniline	99-09-2	8270D	ND		640	ug/kg	1
4-Nitroaniline	100-01-6	8270D	ND		640	ug/kg	1
Nitrobenzene	98-95-3	8270D	ND		330	ug/kg	1
2-Nitrophenol	88-75-5	8270D	ND		640	ug/kg	1
4-Nitrophenol	100-02-7	8270D	ND		1600	ug/kg	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		330	ug/kg	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		330	ug/kg	1
Pentachlorophenol	87-86-5	8270D	ND		1600	ug/kg	1
Phenanthrene	85-01-8	8270D	ND		66	ug/kg	1
Phenol	108-95-2	8270D	ND		330	ug/kg	1
Pyrene	129-00-0	8270D	ND		66	ug/kg	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		330	ug/kg	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		330	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		39	24-137
2-Fluorophenol		50	16-136
Nitrobenzene-d5		39	12-144
Phenol-d5		52	26-148
Terphenyl-d14		55	20-127
2,4,6-Tribromophenol		31	27-128

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: UL02023-008
Description: EB-01-120219	Matrix: Aqueous
Date Sampled: 12/02/2019 1235	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	12/03/2019 1129	AMR		37728

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N		353.2	ND		0.020	mg/L	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-008
Description: EB-01-120219	Matrix: Aqueous
Date Sampled: 12/02/2019 1235	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1316	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-008
Description: EB-01-120219	Matrix: Aqueous
Date Sampled: 12/02/2019 1235	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1316	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130
Toluene-d8		103	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-008
Description: EB-01-120219	Matrix: Aqueous
Date Sampled: 12/02/2019 1235	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1716	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1'-Biphenyl	92-52-4	8270D	ND		4.0	ug/L	1
2,4,5-Trichlorophenol	95-95-4	8270D	ND		4.0	ug/L	1
2,4,6-Trichlorophenol	88-06-2	8270D	ND		4.0	ug/L	1
2,4-Dichlorophenol	120-83-2	8270D	ND		8.0	ug/L	1
2,4-Dimethylphenol	105-67-9	8270D	ND		4.0	ug/L	1
2,4-Dinitrophenol	51-28-5	8270D	ND		20	ug/L	1
2,4-Dinitrotoluene	121-14-2	8270D	ND		8.0	ug/L	1
2,6-Dinitrotoluene	606-20-2	8270D	ND		8.0	ug/L	1
2-Chloronaphthalene	91-58-7	8270D	ND		4.0	ug/L	1
2-Chlorophenol	95-57-8	8270D	ND		4.0	ug/L	1
2-Methylnaphthalene	91-57-6	8270D	ND		0.80	ug/L	1
2-Methylphenol	95-48-7	8270D	ND		4.0	ug/L	1
2-Nitroaniline	88-74-4	8270D	ND		8.0	ug/L	1
2-Nitrophenol	88-75-5	8270D	ND		4.0	ug/L	1
3,3'-Dichlorobenzidine	91-94-1	8270D	ND		4.0	ug/L	1
3+4-Methylphenol	106-44-5	8270D	ND		4.0	ug/L	1
3-Nitroaniline	99-09-2	8270D	ND		8.0	ug/L	1
4,6-Dinitro-2-methylphenol	534-52-1	8270D	ND		20	ug/L	1
4-Bromophenyl phenyl ether	101-55-3	8270D	ND		4.0	ug/L	1
4-Chloro-3-methyl phenol	59-50-7	8270D	ND		4.0	ug/L	1
4-Chloroaniline	106-47-8	8270D	ND		8.0	ug/L	1
4-Chlorophenyl phenyl ether	7005-72-3	8270D	ND		4.0	ug/L	1
4-Nitroaniline	100-01-6	8270D	ND		8.0	ug/L	1
4-Nitrophenol	100-02-7	8270D	ND		20	ug/L	1
Acenaphthene	83-32-9	8270D	ND		0.80	ug/L	1
Acenaphthylene	208-96-8	8270D	ND		0.80	ug/L	1
Acetophenone	98-86-2	8270D	ND		4.0	ug/L	1
Anthracene	120-12-7	8270D	ND		0.80	ug/L	1
Atrazine	1912-24-9	8270D	ND		4.0	ug/L	1
Benzaldehyde	100-52-7	8270D	ND		8.0	ug/L	1
Benzo(a)anthracene	56-55-3	8270D	ND		0.80	ug/L	1
Benzo(a)pyrene	50-32-8	8270D	ND		0.80	ug/L	1
Benzo(b)fluoranthene	205-99-2	8270D	ND		0.80	ug/L	1
Benzo(g,h,i)perylene	191-24-2	8270D	ND		0.80	ug/L	1
Benzo(k)fluoranthene	207-08-9	8270D	ND		0.80	ug/L	1
bis (2-Chloro-1-methylethyl) ether	108-60-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethoxy)methane	111-91-1	8270D	ND		4.0	ug/L	1
bis(2-Chloroethyl)ether	111-44-4	8270D	ND		4.0	ug/L	1
bis(2-Ethylhexyl)phthalate	117-81-7	8270D	ND		4.0	ug/L	1
Butyl benzyl phthalate	85-68-7	8270D	ND		4.0	ug/L	1
Caprolactam	105-60-2	8270D	ND		8.0	ug/L	1
Carbazole	86-74-8	8270D	ND		4.0	ug/L	1
Chrysene	218-01-9	8270D	ND		0.80	ug/L	1
Dibenzo(a,h)anthracene	53-70-3	8270D	ND		0.80	ug/L	1

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# Semivolatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-008
Description: EB-01-120219	Matrix: Aqueous
Date Sampled: 12/02/2019 1235	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3520C	8270D	1	12/08/2019 1716	SCD	12/05/2019 1618	37996

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Dibenzofuran	132-64-9	8270D	ND		4.0	ug/L	1
Diethylphthalate	84-66-2	8270D	ND		4.0	ug/L	1
Dimethyl phthalate	131-11-3	8270D	ND		4.0	ug/L	1
Di-n-butyl phthalate	84-74-2	8270D	ND		4.0	ug/L	1
Di-n-octylphthalate	117-84-0	8270D	ND		4.0	ug/L	1
Fluoranthene	206-44-0	8270D	ND		0.80	ug/L	1
Fluorene	86-73-7	8270D	ND		0.80	ug/L	1
Hexachlorobenzene	118-74-1	8270D	ND		4.0	ug/L	1
Hexachlorobutadiene	87-68-3	8270D	ND		4.0	ug/L	1
Hexachlorocyclopentadiene	77-47-4	8270D	ND		20	ug/L	1
Hexachloroethane	67-72-1	8270D	ND		4.0	ug/L	1
Indeno(1,2,3-c,d)pyrene	193-39-5	8270D	ND		0.80	ug/L	1
Isophorone	78-59-1	8270D	ND		4.0	ug/L	1
Naphthalene	91-20-3	8270D	ND		0.80	ug/L	1
Nitrobenzene	98-95-3	8270D	ND		4.0	ug/L	1
N-Nitrosodi-n-propylamine	621-64-7	8270D	ND		4.0	ug/L	1
N-Nitrosodiphenylamine (Diphenylamine)	86-30-6	8270D	ND		4.0	ug/L	1
Pentachlorophenol	87-86-5	8270D	ND		20	ug/L	1
Phenanthrene	85-01-8	8270D	ND		0.80	ug/L	1
Phenol	108-95-2	8270D	ND		4.0	ug/L	1
Pyrene	129-00-0	8270D	ND		0.80	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
2-Fluorobiphenyl		81	37-129
2-Fluorophenol		57	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		70	28-128
Terphenyl-d14		104	10-148
2,4,6-Tribromophenol		79	35-144

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-009
Description: TB-01-120219	Matrix: Aqueous
Date Sampled: 12/02/2019	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1339	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260B	ND		20	ug/L	1
Benzene	71-43-2	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
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
Cyclohexane	110-82-7	8260B	ND		1.0	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
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
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
Ethylbenzene	100-41-4	8260B	ND		1.0	ug/L	1
2-Hexanone	591-78-6	8260B	ND		10	ug/L	1
Isopropylbenzene	98-82-8	8260B	ND		1.0	ug/L	1
Methyl acetate	79-20-9	8260B	ND		1.0	ug/L	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260B	ND		1.0	ug/L	1
4-Methyl-2-pentanone	108-10-1	8260B	ND		10	ug/L	1
Methylcyclohexane	108-87-2	8260B	ND		5.0	ug/L	1
Methylene chloride	75-09-2	8260B	ND		1.0	ug/L	1
Styrene	100-42-5	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
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260B	ND		1.0	ug/L	1
1,2,4-Trichlorobenzene	120-82-1	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

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: UL02023-009
Description: TB-01-120219	Matrix: Aqueous
Date Sampled: 12/02/2019	Project Name: RI Implementation
Date Received: 12/02/2019	Project Number: 60595649

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260B	1	12/03/2019 1339	TML		37730

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260B	ND		1.0	ug/L	1
Trichlorofluoromethane	75-69-4	8260B	ND		1.0	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		101	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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## QC Summary

# Inorganic non-metals - MB

Sample ID: UQ37728-001

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N	ND		1	0.020	mg/L	12/03/2019 1050

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

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QC Data for Lot Number: UL02023

# Inorganic non-metals - LCS

Sample ID: UQ37728-002

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	0.80	0.76		1	96	90-110	12/03/2019 1052

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Inorganic non-metals - MS

Sample ID: UL02023-008MS

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N	ND	0.80	0.83		1	104	90-110	12/03/2019 1131

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MSD

Sample ID: UL02023-008MD

Matrix: Aqueous

Batch: 37728

Analytical Method: 353.2

Parameter	Sample Amount (mg/L)	Spike Amount (mg/L)	Result (mg/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N	ND	0.80	0.78		1	98	5.7	90-110	20	12/03/2019 1136

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MB

Sample ID: UQ38611-001

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N (soluble)	ND		1	0.50	mg/kg	12/10/2019 1437

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - LCS

Sample ID: UQ38611-002

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	0.80	0.81		1	101	80-120	12/10/2019 1501

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	ND	8.0	8.0		1	100	80-120	12/10/2019 1627

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 38611

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N (soluble)	ND	8.0	7.5		1	94	6.0	80-120	20	12/10/2019 1648

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/L	12/03/2019 1035
Benzene	ND		1	1.0	ug/L	12/03/2019 1035
Bromodichloromethane	ND		1	1.0	ug/L	12/03/2019 1035
Bromoform	ND		1	1.0	ug/L	12/03/2019 1035
Bromomethane (Methyl bromide)	ND		1	2.0	ug/L	12/03/2019 1035
2-Butanone (MEK)	ND		1	10	ug/L	12/03/2019 1035
Carbon disulfide	ND		1	1.0	ug/L	12/03/2019 1035
Carbon tetrachloride	ND		1	1.0	ug/L	12/03/2019 1035
Chlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
Chloroethane	ND		1	2.0	ug/L	12/03/2019 1035
Chloroform	ND		1	1.0	ug/L	12/03/2019 1035
Chloromethane (Methyl chloride)	ND		1	1.0	ug/L	12/03/2019 1035
Cyclohexane	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	1.0	ug/L	12/03/2019 1035
Dibromochloromethane	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dibromoethane (EDB)	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
1,3-Dichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
1,4-Dichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
Dichlorodifluoromethane	ND		1	2.0	ug/L	12/03/2019 1035
1,1-Dichloroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dichloroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,1-Dichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
cis-1,2-Dichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
trans-1,2-Dichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
1,2-Dichloropropane	ND		1	1.0	ug/L	12/03/2019 1035
cis-1,3-Dichloropropene	ND		1	1.0	ug/L	12/03/2019 1035
trans-1,3-Dichloropropene	ND		1	1.0	ug/L	12/03/2019 1035
Ethylbenzene	ND		1	1.0	ug/L	12/03/2019 1035
2-Hexanone	ND		1	10	ug/L	12/03/2019 1035
Isopropylbenzene	ND		1	1.0	ug/L	12/03/2019 1035
Methyl acetate	ND		1	1.0	ug/L	12/03/2019 1035
Methyl tertiary butyl ether (MTBE)	ND		1	1.0	ug/L	12/03/2019 1035
4-Methyl-2-pentanone	ND		1	10	ug/L	12/03/2019 1035
Methylcyclohexane	ND		1	5.0	ug/L	12/03/2019 1035
Methylene chloride	ND		1	1.0	ug/L	12/03/2019 1035
Styrene	ND		1	1.0	ug/L	12/03/2019 1035
1,1,2,2-Tetrachloroethane	ND		1	1.0	ug/L	12/03/2019 1035
Tetrachloroethene	ND		1	1.0	ug/L	12/03/2019 1035
Toluene	ND		1	1.0	ug/L	12/03/2019 1035
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,2,4-Trichlorobenzene	ND		1	1.0	ug/L	12/03/2019 1035
1,1,1-Trichloroethane	ND		1	1.0	ug/L	12/03/2019 1035
1,1,2-Trichloroethane	ND		1	1.0	ug/L	12/03/2019 1035

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37730-001

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	1.0	ug/L	12/03/2019 1035
Trichlorofluoromethane	ND		1	1.0	ug/L	12/03/2019 1035
Vinyl chloride	ND		1	1.0	ug/L	12/03/2019 1035
Xylenes (total)	ND		1	1.0	ug/L	12/03/2019 1035
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		95	70-130			
Bromofluorobenzene		101	70-130			
Toluene-d8		100	70-130			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	98		1	98	60-140	12/03/2019 0947
Benzene	50	50		1	100	70-130	12/03/2019 0947
Bromodichloromethane	50	52		1	103	70-130	12/03/2019 0947
Bromoform	50	48		1	96	70-130	12/03/2019 0947
Bromomethane (Methyl bromide)	50	41		1	81	70-130	12/03/2019 0947
2-Butanone (MEK)	100	96		1	96	70-130	12/03/2019 0947
Carbon disulfide	50	43		1	86	70-130	12/03/2019 0947
Carbon tetrachloride	50	49		1	99	70-130	12/03/2019 0947
Chlorobenzene	50	50		1	99	70-130	12/03/2019 0947
Chloroethane	50	45		1	89	70-130	12/03/2019 0947
Chloroform	50	50		1	100	70-130	12/03/2019 0947
Chloromethane (Methyl chloride)	50	39		1	79	60-140	12/03/2019 0947
Cyclohexane	50	50		1	99	70-130	12/03/2019 0947
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	12/03/2019 0947
Dibromochloromethane	50	52		1	104	70-130	12/03/2019 0947
1,2-Dibromoethane (EDB)	50	50		1	99	70-130	12/03/2019 0947
1,2-Dichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,3-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
1,4-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 0947
Dichlorodifluoromethane	50	42		1	84	60-140	12/03/2019 0947
1,1-Dichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,2-Dichloroethane	50	49		1	97	70-130	12/03/2019 0947
1,1-Dichloroethene	50	52		1	103	70-130	12/03/2019 0947
cis-1,2-Dichloroethene	50	49		1	97	70-130	12/03/2019 0947
trans-1,2-Dichloroethene	50	53		1	106	70-130	12/03/2019 0947
1,2-Dichloropropane	50	50		1	101	70-130	12/03/2019 0947
cis-1,3-Dichloropropene	50	55		1	110	70-130	12/03/2019 0947
trans-1,3-Dichloropropene	50	55		1	109	70-130	12/03/2019 0947
Ethylbenzene	50	50		1	101	70-130	12/03/2019 0947
2-Hexanone	100	95		1	95	70-130	12/03/2019 0947
Isopropylbenzene	50	51		1	102	70-130	12/03/2019 0947
Methyl acetate	50	49		1	99	70-130	12/03/2019 0947
Methyl tertiary butyl ether (MTBE)	50	48		1	95	70-130	12/03/2019 0947
4-Methyl-2-pentanone	100	96		1	96	70-130	12/03/2019 0947
Methylcyclohexane	50	50		1	101	70-130	12/03/2019 0947
Methylene chloride	50	42		1	84	70-130	12/03/2019 0947
Styrene	50	52		1	104	70-130	12/03/2019 0947
1,1,2,2-Tetrachloroethane	50	48		1	95	70-130	12/03/2019 0947
Tetrachloroethene	50	50		1	99	70-130	12/03/2019 0947
Toluene	50	50		1	100	70-130	12/03/2019 0947
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	94	70-130	12/03/2019 0947
1,2,4-Trichlorobenzene	50	49		1	98	70-130	12/03/2019 0947
1,1,1-Trichloroethane	50	49		1	99	70-130	12/03/2019 0947
1,1,2-Trichloroethane	50	48		1	96	70-130	12/03/2019 0947

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37730-002

Matrix: Aqueous

Batch: 37730

Prep Method: 5030B

Analytical Method: 8260B

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	50		1	100	70-130	12/03/2019 0947
Trichlorofluoromethane	50	42		1	84	70-130	12/03/2019 0947
Vinyl chloride	50	39		1	78	70-130	12/03/2019 0947
Xylenes (total)	100	100		1	102	70-130	12/03/2019 0947
Surrogate	Q	% Rec			Acceptance Limit		
1,2-Dichloroethane-d4		96			70-130		
Bromofluorobenzene		103			70-130		
Toluene-d8		100			70-130		

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37799-001

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/03/2019 2342
Benzene	ND		1	5.0	ug/kg	12/03/2019 2342
Bromodichloromethane	ND		1	5.0	ug/kg	12/03/2019 2342
Bromoform	ND		1	5.0	ug/kg	12/03/2019 2342
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/03/2019 2342
2-Butanone (MEK)	ND		1	20	ug/kg	12/03/2019 2342
Carbon disulfide	ND		1	5.0	ug/kg	12/03/2019 2342
Carbon tetrachloride	ND		1	5.0	ug/kg	12/03/2019 2342
Chlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
Chloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
Chloroform	ND		1	5.0	ug/kg	12/03/2019 2342
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/03/2019 2342
Cyclohexane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/03/2019 2342
Dibromochloromethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/03/2019 2342
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/03/2019 2342
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/03/2019 2342
Ethylbenzene	ND		1	5.0	ug/kg	12/03/2019 2342
2-Hexanone	ND		1	10	ug/kg	12/03/2019 2342
Isopropylbenzene	ND		1	5.0	ug/kg	12/03/2019 2342
Methyl acetate	ND		1	5.0	ug/kg	12/03/2019 2342
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/03/2019 2342
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/03/2019 2342
Methylcyclohexane	ND		1	5.0	ug/kg	12/03/2019 2342
Methylene chloride	ND		1	5.0	ug/kg	12/03/2019 2342
Styrene	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
Tetrachloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
Toluene	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/03/2019 2342

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37799-001

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/03/2019 2342
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/03/2019 2342
Vinyl chloride	ND		1	5.0	ug/kg	12/03/2019 2342
Xylenes (total)	ND		1	10	ug/kg	12/03/2019 2342
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		92	53-142			
Bromofluorobenzene		98	47-138			
Toluene-d8		101	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Shealy Environmental Services, Inc.

106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

QC Data for Lot Number: UL02023

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37799-002

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	107	60-140	12/03/2019 2319
Benzene	50	47		1	94	70-130	12/03/2019 2319
Bromodichloromethane	50	47		1	95	70-130	12/03/2019 2319
Bromoform	50	48		1	95	70-130	12/03/2019 2319
Bromomethane (Methyl bromide)	50	45		1	90	70-130	12/03/2019 2319
2-Butanone (MEK)	100	95		1	95	60-140	12/03/2019 2319
Carbon disulfide	50	47		1	94	70-130	12/03/2019 2319
Carbon tetrachloride	50	49		1	97	70-130	12/03/2019 2319
Chlorobenzene	50	48		1	96	70-130	12/03/2019 2319
Chloroethane	50	48		1	97	70-130	12/03/2019 2319
Chloroform	50	46		1	92	70-130	12/03/2019 2319
Chloromethane (Methyl chloride)	50	44		1	87	60-140	12/03/2019 2319
Cyclohexane	50	52		1	103	70-130	12/03/2019 2319
1,2-Dibromo-3-chloropropane (DBCP)	50	43		1	86	70-130	12/03/2019 2319
Dibromochloromethane	50	48		1	96	70-130	12/03/2019 2319
1,2-Dibromoethane (EDB)	50	47		1	94	70-130	12/03/2019 2319
1,2-Dichlorobenzene	50	48		1	96	70-130	12/03/2019 2319
1,3-Dichlorobenzene	50	49		1	99	70-130	12/03/2019 2319
1,4-Dichlorobenzene	50	49		1	98	70-130	12/03/2019 2319
Dichlorodifluoromethane	50	47		1	95	60-140	12/03/2019 2319
1,1-Dichloroethane	50	46		1	92	70-130	12/03/2019 2319
1,2-Dichloroethane	50	46		1	92	70-130	12/03/2019 2319
1,1-Dichloroethene	50	56		1	111	70-130	12/03/2019 2319
cis-1,2-Dichloroethene	50	46		1	91	70-130	12/03/2019 2319
trans-1,2-Dichloroethene	50	50		1	101	70-130	12/03/2019 2319
1,2-Dichloropropane	50	47		1	94	70-130	12/03/2019 2319
cis-1,3-Dichloropropene	50	50		1	100	70-130	12/03/2019 2319
trans-1,3-Dichloropropene	50	51		1	102	70-130	12/03/2019 2319
Ethylbenzene	50	49		1	98	70-130	12/03/2019 2319
2-Hexanone	100	110		1	107	70-130	12/03/2019 2319
Isopropylbenzene	50	48		1	95	70-130	12/03/2019 2319
Methyl acetate	50	43		1	85	70-130	12/03/2019 2319
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	12/03/2019 2319
4-Methyl-2-pentanone	100	87		1	87	70-130	12/03/2019 2319
Methylcyclohexane	50	55		1	109	70-130	12/03/2019 2319
Methylene chloride	50	43		1	86	70-130	12/03/2019 2319
Styrene	50	49		1	97	70-130	12/03/2019 2319
1,1,2,2-Tetrachloroethane	50	46		1	91	70-130	12/03/2019 2319
Tetrachloroethene	50	50		1	100	70-130	12/03/2019 2319
Toluene	50	47		1	94	70-130	12/03/2019 2319
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	51		1	102	70-130	12/03/2019 2319
1,2,4-Trichlorobenzene	50	47		1	95	70-130	12/03/2019 2319
1,1,1-Trichloroethane	50	46		1	92	70-130	12/03/2019 2319
1,1,2-Trichloroethane	50	47		1	94	70-130	12/03/2019 2319

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37799-002

Matrix: Solid

Batch: 37799

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	47		1	95	70-130	12/03/2019 2319
Trichlorofluoromethane	50	50		1	101	70-130	12/03/2019 2319
Vinyl chloride	50	43		1	87	70-130	12/03/2019 2319
Xylenes (total)	100	98		1	98	70-130	12/03/2019 2319
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		89	53-142				
Bromofluorobenzene		99	47-138				
Toluene-d8		104	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37838-001

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/04/2019 1015
Benzene	ND		1	5.0	ug/kg	12/04/2019 1015
Bromodichloromethane	ND		1	5.0	ug/kg	12/04/2019 1015
Bromoform	ND		1	5.0	ug/kg	12/04/2019 1015
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/04/2019 1015
2-Butanone (MEK)	ND		1	20	ug/kg	12/04/2019 1015
Carbon disulfide	ND		1	5.0	ug/kg	12/04/2019 1015
Carbon tetrachloride	ND		1	5.0	ug/kg	12/04/2019 1015
Chlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
Chloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
Chloroform	ND		1	5.0	ug/kg	12/04/2019 1015
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/04/2019 1015
Cyclohexane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/04/2019 1015
Dibromochloromethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/04/2019 1015
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/04/2019 1015
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/04/2019 1015
Ethylbenzene	ND		1	5.0	ug/kg	12/04/2019 1015
2-Hexanone	ND		1	10	ug/kg	12/04/2019 1015
Isopropylbenzene	ND		1	5.0	ug/kg	12/04/2019 1015
Methyl acetate	ND		1	5.0	ug/kg	12/04/2019 1015
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/04/2019 1015
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/04/2019 1015
Methylcyclohexane	ND		1	5.0	ug/kg	12/04/2019 1015
Methylene chloride	ND		1	5.0	ug/kg	12/04/2019 1015
Styrene	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
Tetrachloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
Toluene	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/04/2019 1015

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ37838-001

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/04/2019 1015
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/04/2019 1015
Vinyl chloride	ND		1	5.0	ug/kg	12/04/2019 1015
Xylenes (total)	ND		1	10	ug/kg	12/04/2019 1015
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		91	53-142			
Bromofluorobenzene		101	47-138			
Toluene-d8		99	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37838-002

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	100		1	100	60-140	12/04/2019 0952
Benzene	50	47		1	94	70-130	12/04/2019 0952
Bromodichloromethane	50	48		1	97	70-130	12/04/2019 0952
Bromoform	50	49		1	99	70-130	12/04/2019 0952
Bromomethane (Methyl bromide)	50	48		1	97	70-130	12/04/2019 0952
2-Butanone (MEK)	100	94		1	94	60-140	12/04/2019 0952
Carbon disulfide	50	46		1	92	70-130	12/04/2019 0952
Carbon tetrachloride	50	47		1	93	70-130	12/04/2019 0952
Chlorobenzene	50	48		1	95	70-130	12/04/2019 0952
Chloroethane	50	52		1	104	70-130	12/04/2019 0952
Chloroform	50	47		1	94	70-130	12/04/2019 0952
Chloromethane (Methyl chloride)	50	48		1	97	60-140	12/04/2019 0952
Cyclohexane	50	47		1	94	70-130	12/04/2019 0952
1,2-Dibromo-3-chloropropane (DBCP)	50	46		1	92	70-130	12/04/2019 0952
Dibromochloromethane	50	49		1	97	70-130	12/04/2019 0952
1,2-Dibromoethane (EDB)	50	47		1	95	70-130	12/04/2019 0952
1,2-Dichlorobenzene	50	49		1	98	70-130	12/04/2019 0952
1,3-Dichlorobenzene	50	48		1	97	70-130	12/04/2019 0952
1,4-Dichlorobenzene	50	49		1	98	70-130	12/04/2019 0952
Dichlorodifluoromethane	50	50		1	99	60-140	12/04/2019 0952
1,1-Dichloroethane	50	47		1	93	70-130	12/04/2019 0952
1,2-Dichloroethane	50	46		1	92	70-130	12/04/2019 0952
1,1-Dichloroethene	50	53		1	106	70-130	12/04/2019 0952
cis-1,2-Dichloroethene	50	47		1	95	70-130	12/04/2019 0952
trans-1,2-Dichloroethene	50	50		1	100	70-130	12/04/2019 0952
1,2-Dichloropropane	50	48		1	97	70-130	12/04/2019 0952
cis-1,3-Dichloropropene	50	51		1	102	70-130	12/04/2019 0952
trans-1,3-Dichloropropene	50	50		1	101	70-130	12/04/2019 0952
Ethylbenzene	50	48		1	95	70-130	12/04/2019 0952
2-Hexanone	100	100		1	102	70-130	12/04/2019 0952
Isopropylbenzene	50	47		1	93	70-130	12/04/2019 0952
Methyl acetate	50	47		1	94	70-130	12/04/2019 0952
Methyl tertiary butyl ether (MTBE)	50	46		1	91	70-130	12/04/2019 0952
4-Methyl-2-pentanone	100	93		1	93	70-130	12/04/2019 0952
Methylcyclohexane	50	47		1	94	70-130	12/04/2019 0952
Methylene chloride	50	44		1	88	70-130	12/04/2019 0952
Styrene	50	48		1	96	70-130	12/04/2019 0952
1,1,2,2-Tetrachloroethane	50	47		1	93	70-130	12/04/2019 0952
Tetrachloroethene	50	48		1	95	70-130	12/04/2019 0952
Toluene	50	45		1	90	70-130	12/04/2019 0952
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	46		1	92	70-130	12/04/2019 0952
1,2,4-Trichlorobenzene	50	50		1	100	70-130	12/04/2019 0952
1,1,1-Trichloroethane	50	46		1	93	70-130	12/04/2019 0952
1,1,2-Trichloroethane	50	48		1	95	70-130	12/04/2019 0952

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37838-002

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	46		1	93	70-130	12/04/2019 0952
Trichlorofluoromethane	50	48		1	96	70-130	12/04/2019 0952
Vinyl chloride	50	45		1	90	70-130	12/04/2019 0952
Xylenes (total)	100	96		1	96	70-130	12/04/2019 0952
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		80	53-142				
Bromofluorobenzene		84	47-138				
Toluene-d8		82	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	ND	110	320	N	1	287	70-130	12/04/2019 1745
Benzene	ND	55	57		1	103	70-130	12/04/2019 1745
Bromodichloromethane	ND	55	55		1	100	70-130	12/04/2019 1745
Bromoform	ND	55	56		1	101	70-130	12/04/2019 1745
Bromomethane (Methyl bromide)	ND	55	44		1	80	70-130	12/04/2019 1745
2-Butanone (MEK)	ND	110	68	N	1	62	70-130	12/04/2019 1745
Carbon disulfide	ND	55	59		1	108	70-130	12/04/2019 1745
Carbon tetrachloride	ND	55	60		1	109	70-130	12/04/2019 1745
Chlorobenzene	ND	55	59		1	108	70-130	12/04/2019 1745
Chloroethane	ND	55	50		1	90	70-130	12/04/2019 1745
Chloroform	ND	55	56		1	102	70-130	12/04/2019 1745
Chloromethane (Methyl chloride)	ND	55	44		1	80	60-140	12/04/2019 1745
Cyclohexane	ND	55	65		1	119	70-130	12/04/2019 1745
1,2-Dibromo-3-chloropropane (DBCP)	ND	55	67		1	121	70-130	12/04/2019 1745
Dibromochloromethane	ND	55	59		1	107	70-130	12/04/2019 1745
1,2-Dibromoethane (EDB)	ND	55	58		1	105	70-130	12/04/2019 1745
1,2-Dichlorobenzene	ND	55	63		1	114	70-130	12/04/2019 1745
1,3-Dichlorobenzene	ND	55	68		1	124	70-130	12/04/2019 1745
1,4-Dichlorobenzene	ND	55	68		1	124	70-130	12/04/2019 1745
Dichlorodifluoromethane	ND	55	49		1	90	60-140	12/04/2019 1745
1,1-Dichloroethane	ND	55	57		1	104	70-130	12/04/2019 1745
1,2-Dichloroethane	ND	55	53		1	96	70-130	12/04/2019 1745
1,1-Dichloroethene	ND	55	70		1	128	70-130	12/04/2019 1745
cis-1,2-Dichloroethene	ND	55	56		1	102	70-130	12/04/2019 1745
trans-1,2-Dichloroethene	ND	55	64		1	117	70-130	12/04/2019 1745
1,2-Dichloropropane	ND	55	56		1	101	70-130	12/04/2019 1745
cis-1,3-Dichloropropene	ND	55	56		1	102	70-130	12/04/2019 1745
trans-1,3-Dichloropropene	ND	55	62		1	112	70-130	12/04/2019 1745
Ethylbenzene	ND	55	62		1	113	70-130	12/04/2019 1745
2-Hexanone	ND	110	92		1	84	70-130	12/04/2019 1745
Isopropylbenzene	ND	55	59		1	107	70-130	12/04/2019 1745
Methyl acetate	ND	55	110	N	1	209	70-130	12/04/2019 1745
Methyl tertiary butyl ether (MTBE)	ND	55	52		1	94	70-130	12/04/2019 1745
4-Methyl-2-pentanone	ND	110	100		1	93	70-130	12/04/2019 1745
Methylcyclohexane	ND	55	65		1	118	70-130	12/04/2019 1745
Methylene chloride	ND	55	55		1	100	70-130	12/04/2019 1745
Styrene	ND	55	57		1	104	70-130	12/04/2019 1745
1,1,2,2-Tetrachloroethane	ND	55	71		1	130	70-130	12/04/2019 1745
Tetrachloroethene	ND	55	66		1	120	70-130	12/04/2019 1745
Toluene	ND	55	61		1	110	70-130	12/04/2019 1745
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	55	65		1	119	70-130	12/04/2019 1745
1,2,4-Trichlorobenzene	ND	55	43		1	79	70-130	12/04/2019 1745
1,1,1-Trichloroethane	ND	55	58		1	105	70-130	12/04/2019 1745
1,1,2-Trichloroethane	ND	55	58		1	105	70-130	12/04/2019 1745

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	55	57		1	104	70-130	12/04/2019 1745
Trichlorofluoromethane	ND	55	51		1	93	70-130	12/04/2019 1745
Vinyl chloride	ND	55	44		1	79	70-130	12/04/2019 1745
Xylenes (total)	ND	110	120		1	111	70-130	12/04/2019 1745
Surrogate	Q	% Rec	Acceptance Limit					
1,2-Dichloroethane-d4		87	53-142					
Bromofluorobenzene		90	47-138					
Toluene-d8		110	68-124					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	ND	100	290	N	1	278	10	70-130	20	12/04/2019 1808
Benzene	ND	51	50		1	98	12	70-130	20	12/04/2019 1808
Bromodichloromethane	ND	51	49		1	96	10	70-130	20	12/04/2019 1808
Bromoform	ND	51	50		1	98	10	70-130	20	12/04/2019 1808
Bromomethane (Methyl bromide)	ND	51	39		1	76	11	70-130	20	12/04/2019 1808
2-Butanone (MEK)	ND	100	63	N	1	61	8.8	70-130	20	12/04/2019 1808
Carbon disulfide	ND	51	51		1	100	15	70-130	20	12/04/2019 1808
Carbon tetrachloride	ND	51	53		1	102	13	70-130	20	12/04/2019 1808
Chlorobenzene	ND	51	51		1	99	15	70-130	20	12/04/2019 1808
Chloroethane	ND	51	43		1	83	15	70-130	20	12/04/2019 1808
Chloroform	ND	51	50		1	97	12	70-130	20	12/04/2019 1808
Chloromethane (Methyl chloride)	ND	51	37		1	73	16	60-140	20	12/04/2019 1808
Cyclohexane	ND	51	56		1	110	15	70-130	20	12/04/2019 1808
1,2-Dibromo-3-chloropropane (DBCP)	ND	51	59		1	115	12	70-130	20	12/04/2019 1808
Dibromochloromethane	ND	51	53		1	102	11	70-130	20	12/04/2019 1808
1,2-Dibromoethane (EDB)	ND	51	52		1	101	11	70-130	20	12/04/2019 1808
1,2-Dichlorobenzene	ND	51	55		1	107	13	70-130	20	12/04/2019 1808
1,3-Dichlorobenzene	ND	51	58		1	112	16	70-130	20	12/04/2019 1808
1,4-Dichlorobenzene	ND	51	57		1	112	17	70-130	20	12/04/2019 1808
Dichlorodifluoromethane	ND	51	41		1	80	18	60-140	20	12/04/2019 1808
1,1-Dichloroethane	ND	51	51		1	99	11	70-130	20	12/04/2019 1808
1,2-Dichloroethane	ND	51	48		1	94	9.4	70-130	20	12/04/2019 1808
1,1-Dichloroethene	ND	51	62		1	120	13	70-130	20	12/04/2019 1808
cis-1,2-Dichloroethene	ND	51	50		1	97	12	70-130	20	12/04/2019 1808
trans-1,2-Dichloroethene	ND	51	56		1	109	13	70-130	20	12/04/2019 1808
1,2-Dichloropropane	ND	51	50		1	97	11	70-130	20	12/04/2019 1808
cis-1,3-Dichloropropene	ND	51	51		1	100	8.6	70-130	20	12/04/2019 1808
trans-1,3-Dichloropropene	ND	51	54		1	106	13	70-130	20	12/04/2019 1808
Ethylbenzene	ND	51	53		1	104	15	70-130	20	12/04/2019 1808
2-Hexanone	ND	100	85		1	83	7.3	70-130	20	12/04/2019 1808
Isopropylbenzene	ND	51	51		1	98	15	70-130	20	12/04/2019 1808
Methyl acetate	ND	51	100	N	1	197	13	70-130	20	12/04/2019 1808
Methyl tertiary butyl ether (MTBE)	ND	51	46		1	91	11	70-130	20	12/04/2019 1808
4-Methyl-2-pentanone	ND	100	96		1	93	6.2	70-130	20	12/04/2019 1808
Methylcyclohexane	ND	51	55		1	107	17	70-130	20	12/04/2019 1808
Methylene chloride	ND	51	48		1	93	14	70-130	20	12/04/2019 1808
Styrene	ND	51	50		1	97	15	70-130	20	12/04/2019 1808
1,1,2,2-Tetrachloroethane	ND	51	64		1	124	11	70-130	20	12/04/2019 1808
Tetrachloroethene	ND	51	56		1	109	16	70-130	20	12/04/2019 1808
Toluene	ND	51	52		1	101	15	70-130	20	12/04/2019 1808
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	58		1	112	13	70-130	20	12/04/2019 1808
1,2,4-Trichlorobenzene	ND	51	39		1	76	11	70-130	20	12/04/2019 1808
1,1,1-Trichloroethane	ND	51	51		1	99	13	70-130	20	12/04/2019 1808
1,1,2-Trichloroethane	ND	51	51		1	100	12	70-130	20	12/04/2019 1808

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37838

Prep Method: 5035

Analytical Method: 8260B

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	ND	51	51		1	100	11	70-130	20	12/04/2019 1808
Trichlorofluoromethane	ND	51	41	+	1	80	22	70-130	20	12/04/2019 1808
Vinyl chloride	ND	51	37		1	72	17	70-130	20	12/04/2019 1808
Xylenes (total)	ND	100	100		1	102	15	70-130	20	12/04/2019 1808
Surrogate	Q	% Rec	Acceptance Limit							
1,2-Dichloroethane-d4		88	53-142							
Bromofluorobenzene		86	47-138							
Toluene-d8		107	68-124							

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38275-001

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	12/08/2019 1601
Benzene	ND		1	5.0	ug/kg	12/08/2019 1601
Bromodichloromethane	ND		1	5.0	ug/kg	12/08/2019 1601
Bromoform	ND		1	5.0	ug/kg	12/08/2019 1601
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	12/08/2019 1601
2-Butanone (MEK)	ND		1	20	ug/kg	12/08/2019 1601
Carbon disulfide	ND		1	5.0	ug/kg	12/08/2019 1601
Carbon tetrachloride	ND		1	5.0	ug/kg	12/08/2019 1601
Chlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
Chloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
Chloroform	ND		1	5.0	ug/kg	12/08/2019 1601
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	12/08/2019 1601
Cyclohexane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	12/08/2019 1601
Dibromochloromethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
Dichlorodifluoromethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,1-Dichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,1-Dichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
1,2-Dichloropropane	ND		1	5.0	ug/kg	12/08/2019 1601
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/08/2019 1601
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	12/08/2019 1601
Ethylbenzene	ND		1	5.0	ug/kg	12/08/2019 1601
2-Hexanone	ND		1	10	ug/kg	12/08/2019 1601
Isopropylbenzene	ND		1	5.0	ug/kg	12/08/2019 1601
Methyl acetate	ND		1	5.0	ug/kg	12/08/2019 1601
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	12/08/2019 1601
4-Methyl-2-pentanone	ND		1	10	ug/kg	12/08/2019 1601
Methylcyclohexane	ND		1	5.0	ug/kg	12/08/2019 1601
Methylene chloride	ND		1	5.0	ug/kg	12/08/2019 1601
Styrene	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
Tetrachloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
Toluene	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	12/08/2019 1601

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: UQ38275-001

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	12/08/2019 1601
Trichlorofluoromethane	ND		1	5.0	ug/kg	12/08/2019 1601
Vinyl chloride	ND		1	5.0	ug/kg	12/08/2019 1601
Xylenes (total)	ND		1	10	ug/kg	12/08/2019 1601
Surrogate	Q	% Rec	Acceptance Limit			
1,2-Dichloroethane-d4		92	53-142			
Bromofluorobenzene		101	47-138			
Toluene-d8		102	68-124			

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38275-002

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	89		1	89	60-140	12/08/2019 1514
Benzene	50	48		1	96	70-130	12/08/2019 1514
Bromodichloromethane	50	50		1	99	70-130	12/08/2019 1514
Bromoform	50	50		1	101	70-130	12/08/2019 1514
Bromomethane (Methyl bromide)	50	46		1	92	70-130	12/08/2019 1514
2-Butanone (MEK)	100	86		1	86	60-140	12/08/2019 1514
Carbon disulfide	50	41		1	83	70-130	12/08/2019 1514
Carbon tetrachloride	50	49		1	98	70-130	12/08/2019 1514
Chlorobenzene	50	49		1	98	70-130	12/08/2019 1514
Chloroethane	50	50		1	101	70-130	12/08/2019 1514
Chloroform	50	48		1	97	70-130	12/08/2019 1514
Chloromethane (Methyl chloride)	50	47		1	94	60-140	12/08/2019 1514
Cyclohexane	50	51		1	102	70-130	12/08/2019 1514
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	96	70-130	12/08/2019 1514
Dibromochloromethane	50	49		1	99	70-130	12/08/2019 1514
1,2-Dibromoethane (EDB)	50	49		1	98	70-130	12/08/2019 1514
1,2-Dichlorobenzene	50	50		1	100	70-130	12/08/2019 1514
1,3-Dichlorobenzene	50	49		1	99	70-130	12/08/2019 1514
1,4-Dichlorobenzene	50	50		1	100	70-130	12/08/2019 1514
Dichlorodifluoromethane	50	45		1	89	60-140	12/08/2019 1514
1,1-Dichloroethane	50	47		1	95	70-130	12/08/2019 1514
1,2-Dichloroethane	50	49		1	97	70-130	12/08/2019 1514
1,1-Dichloroethene	50	56		1	112	70-130	12/08/2019 1514
cis-1,2-Dichloroethene	50	49		1	99	70-130	12/08/2019 1514
trans-1,2-Dichloroethene	50	53		1	105	70-130	12/08/2019 1514
1,2-Dichloropropane	50	49		1	98	70-130	12/08/2019 1514
cis-1,3-Dichloropropene	50	52		1	104	70-130	12/08/2019 1514
trans-1,3-Dichloropropene	50	52		1	104	70-130	12/08/2019 1514
Ethylbenzene	50	49		1	98	70-130	12/08/2019 1514
2-Hexanone	100	97		1	97	70-130	12/08/2019 1514
Isopropylbenzene	50	49		1	97	70-130	12/08/2019 1514
Methyl acetate	50	48		1	96	70-130	12/08/2019 1514
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	12/08/2019 1514
4-Methyl-2-pentanone	100	98		1	98	70-130	12/08/2019 1514
Methylcyclohexane	50	52		1	104	70-130	12/08/2019 1514
Methylene chloride	50	45		1	89	70-130	12/08/2019 1514
Styrene	50	49		1	98	70-130	12/08/2019 1514
1,1,2,2-Tetrachloroethane	50	48		1	97	70-130	12/08/2019 1514
Tetrachloroethene	50	49		1	98	70-130	12/08/2019 1514
Toluene	50	46		1	91	70-130	12/08/2019 1514
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	50		1	101	70-130	12/08/2019 1514
1,2,4-Trichlorobenzene	50	52		1	103	70-130	12/08/2019 1514
1,1,1-Trichloroethane	50	47		1	94	70-130	12/08/2019 1514
1,1,2-Trichloroethane	50	48		1	96	70-130	12/08/2019 1514

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: UQ38275-002

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	49		1	97	70-130	12/08/2019 1514
Trichlorofluoromethane	50	47		1	94	70-130	12/08/2019 1514
Vinyl chloride	50	43		1	86	70-130	12/08/2019 1514
Xylenes (total)	100	99		1	99	70-130	12/08/2019 1514
Surrogate	Q	% Rec	Acceptance Limit				
1,2-Dichloroethane-d4		93	53-142				
Bromofluorobenzene		104	47-138				
Toluene-d8		104	68-124				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ38275-003

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	90		1	90	1.3	60-140	20	12/08/2019 1537
Benzene	50	48		1	95	0.30	70-130	20	12/08/2019 1537
Bromodichloromethane	50	49		1	99	0.42	70-130	20	12/08/2019 1537
Bromoform	50	52		1	104	3.4	70-130	20	12/08/2019 1537
Bromomethane (Methyl bromide)	50	48		1	95	3.3	70-130	20	12/08/2019 1537
2-Butanone (MEK)	100	89		1	89	3.4	60-140	20	12/08/2019 1537
Carbon disulfide	50	42		1	84	1.6	70-130	20	12/08/2019 1537
Carbon tetrachloride	50	50		1	99	1.5	70-130	20	12/08/2019 1537
Chlorobenzene	50	48		1	97	0.96	70-130	20	12/08/2019 1537
Chloroethane	50	50		1	101	0.16	70-130	20	12/08/2019 1537
Chloroform	50	49		1	98	1.3	70-130	20	12/08/2019 1537
Chloromethane (Methyl chloride)	50	46		1	92	3.0	60-140	20	12/08/2019 1537
Cyclohexane	50	51		1	103	0.11	70-130	20	12/08/2019 1537
1,2-Dibromo-3-chloropropane (DBCP)	50	49		1	97	1.3	70-130	20	12/08/2019 1537
Dibromochloromethane	50	49		1	99	0.075	70-130	20	12/08/2019 1537
1,2-Dibromoethane (EDB)	50	49		1	99	0.79	70-130	20	12/08/2019 1537
1,2-Dichlorobenzene	50	49		1	98	1.5	70-130	20	12/08/2019 1537
1,3-Dichlorobenzene	50	49		1	97	1.1	70-130	20	12/08/2019 1537
1,4-Dichlorobenzene	50	49		1	98	1.4	70-130	20	12/08/2019 1537
Dichlorodifluoromethane	50	42		1	84	5.5	60-140	20	12/08/2019 1537
1,1-Dichloroethane	50	48		1	96	1.3	70-130	20	12/08/2019 1537
1,2-Dichloroethane	50	48		1	97	0.67	70-130	20	12/08/2019 1537
1,1-Dichloroethene	50	57		1	113	0.88	70-130	20	12/08/2019 1537
cis-1,2-Dichloroethene	50	50		1	101	1.8	70-130	20	12/08/2019 1537
trans-1,2-Dichloroethene	50	54		1	108	2.6	70-130	20	12/08/2019 1537
1,2-Dichloropropane	50	50		1	99	1.0	70-130	20	12/08/2019 1537
cis-1,3-Dichloropropene	50	52		1	104	0.28	70-130	20	12/08/2019 1537
trans-1,3-Dichloropropene	50	52		1	103	0.79	70-130	20	12/08/2019 1537
Ethylbenzene	50	49		1	98	0.32	70-130	20	12/08/2019 1537
2-Hexanone	100	97		1	97	0.16	70-130	20	12/08/2019 1537
Isopropylbenzene	50	48		1	96	1.3	70-130	20	12/08/2019 1537
Methyl acetate	50	51		1	102	6.4	70-130	20	12/08/2019 1537
Methyl tertiary butyl ether (MTBE)	50	48		1	96	2.1	70-130	20	12/08/2019 1537
4-Methyl-2-pentanone	100	100		1	102	4.3	70-130	20	12/08/2019 1537
Methylcyclohexane	50	52		1	104	0.023	70-130	20	12/08/2019 1537
Methylene chloride	50	47		1	94	4.8	70-130	20	12/08/2019 1537
Styrene	50	49		1	99	0.87	70-130	20	12/08/2019 1537
1,1,2,2-Tetrachloroethane	50	49		1	98	0.96	70-130	20	12/08/2019 1537
Tetrachloroethene	50	47		1	94	3.3	70-130	20	12/08/2019 1537
Toluene	50	45		1	90	1.0	70-130	20	12/08/2019 1537
1,1,2-Trichloro-1,1,2-Trifluoroethane	50	49		1	98	2.6	70-130	20	12/08/2019 1537
1,2,4-Trichlorobenzene	50	50		1	101	2.6	70-130	20	12/08/2019 1537
1,1,1-Trichloroethane	50	48		1	96	2.2	70-130	20	12/08/2019 1537
1,1,2-Trichloroethane	50	48		1	96	0.23	70-130	20	12/08/2019 1537

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: UQ38275-003

Matrix: Solid

Batch: 38275

Prep Method: 5035

Analytical Method: 8260B

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	48		1	96	0.72	70-130	20	12/08/2019 1537
Trichlorofluoromethane	50	47		1	94	0.068	70-130	20	12/08/2019 1537
Vinyl chloride	50	43		1	87	0.90	70-130	20	12/08/2019 1537
Xylenes (total)	100	98		1	98	0.64	70-130	20	12/08/2019 1537
Surrogate	Q	% Rec	Acceptance Limit						
1,2-Dichloroethane-d4		93	53-142						
Bromofluorobenzene		101	47-138						
Toluene-d8		99	68-124						

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and  $\geq$  DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37989-001

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acenaphthene	ND		1	13	ug/kg	12/09/2019 1205
Acenaphthylene	ND		1	13	ug/kg	12/09/2019 1205
Acetophenone	ND		1	67	ug/kg	12/09/2019 1205
Anthracene	ND		1	13	ug/kg	12/09/2019 1205
Atrazine	ND		1	67	ug/kg	12/09/2019 1205
Benzaldehyde	ND		1	67	ug/kg	12/09/2019 1205
Benzo(a)anthracene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(a)pyrene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(b)fluoranthene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(g,h,i)perylene	ND		1	13	ug/kg	12/09/2019 1205
Benzo(k)fluoranthene	ND		1	13	ug/kg	12/09/2019 1205
1,1'-Biphenyl	ND		1	67	ug/kg	12/09/2019 1205
4-Bromophenyl phenyl ether	ND		1	67	ug/kg	12/09/2019 1205
Butyl benzyl phthalate	ND		1	67	ug/kg	12/09/2019 1205
Caprolactam	ND		1	67	ug/kg	12/09/2019 1205
Carbazole	ND		1	67	ug/kg	12/09/2019 1205
bis (2-Chloro-1-methylethyl) ether	ND		1	67	ug/kg	12/09/2019 1205
4-Chloro-3-methyl phenol	ND		1	67	ug/kg	12/09/2019 1205
4-Chloroaniline	ND		1	67	ug/kg	12/09/2019 1205
bis(2-Chloroethoxy)methane	ND		1	67	ug/kg	12/09/2019 1205
bis(2-Chloroethyl)ether	ND		1	67	ug/kg	12/09/2019 1205
2-Chloronaphthalene	ND		1	67	ug/kg	12/09/2019 1205
2-Chlorophenol	ND		1	67	ug/kg	12/09/2019 1205
4-Chlorophenyl phenyl ether	ND		1	67	ug/kg	12/09/2019 1205
Chrysene	ND		1	13	ug/kg	12/09/2019 1205
Dibenzo(a,h)anthracene	ND		1	13	ug/kg	12/09/2019 1205
Dibenzofuran	ND		1	67	ug/kg	12/09/2019 1205
3,3'-Dichlorobenzidine	ND		1	67	ug/kg	12/09/2019 1205
2,4-Dichlorophenol	ND		1	67	ug/kg	12/09/2019 1205
Diethylphthalate	ND		1	67	ug/kg	12/09/2019 1205
Dimethyl phthalate	ND		1	67	ug/kg	12/09/2019 1205
2,4-Dimethylphenol	ND		1	67	ug/kg	12/09/2019 1205
Di-n-butyl phthalate	ND		1	67	ug/kg	12/09/2019 1205
4,6-Dinitro-2-methylphenol	ND		1	330	ug/kg	12/09/2019 1205
2,4-Dinitrophenol	ND		1	330	ug/kg	12/09/2019 1205
2,4-Dinitrotoluene	ND		1	130	ug/kg	12/09/2019 1205
2,6-Dinitrotoluene	ND		1	130	ug/kg	12/09/2019 1205
Di-n-octylphthalate	ND		1	67	ug/kg	12/09/2019 1205
bis(2-Ethylhexyl)phthalate	ND		1	67	ug/kg	12/09/2019 1205
Fluoranthene	ND		1	13	ug/kg	12/09/2019 1205
Fluorene	ND		1	13	ug/kg	12/09/2019 1205
Hexachlorobenzene	ND		1	67	ug/kg	12/09/2019 1205
Hexachlorobutadiene	ND		1	67	ug/kg	12/09/2019 1205
Hexachlorocyclopentadiene	ND		1	330	ug/kg	12/09/2019 1205

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37989-001

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Hexachloroethane	ND		1	67	ug/kg	12/09/2019 1205
Indeno(1,2,3-c,d)pyrene	ND		1	13	ug/kg	12/09/2019 1205
Isophorone	ND		1	67	ug/kg	12/09/2019 1205
2-Methylnaphthalene	ND		1	13	ug/kg	12/09/2019 1205
2-Methylphenol	ND		1	67	ug/kg	12/09/2019 1205
3+4-Methylphenol	ND		1	130	ug/kg	12/09/2019 1205
Naphthalene	ND		1	13	ug/kg	12/09/2019 1205
2-Nitroaniline	ND		1	130	ug/kg	12/09/2019 1205
3-Nitroaniline	ND		1	130	ug/kg	12/09/2019 1205
4-Nitroaniline	ND		1	130	ug/kg	12/09/2019 1205
Nitrobenzene	ND		1	67	ug/kg	12/09/2019 1205
2-Nitrophenol	ND		1	130	ug/kg	12/09/2019 1205
4-Nitrophenol	ND		1	330	ug/kg	12/09/2019 1205
N-Nitrosodi-n-propylamine	ND		1	67	ug/kg	12/09/2019 1205
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	67	ug/kg	12/09/2019 1205
Pentachlorophenol	ND		1	330	ug/kg	12/09/2019 1205
Phenanthrene	ND		1	13	ug/kg	12/09/2019 1205
Phenol	ND		1	67	ug/kg	12/09/2019 1205
Pyrene	ND		1	13	ug/kg	12/09/2019 1205
2,4,5-Trichlorophenol	ND		1	67	ug/kg	12/09/2019 1205
2,4,6-Trichlorophenol	ND		1	67	ug/kg	12/09/2019 1205

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		66	24-137
2-Fluorophenol		79	16-136
Nitrobenzene-d5		72	12-144
Phenol-d5		83	26-148
Terphenyl-d14		95	20-127
2,4,6-Tribromophenol		58	27-128

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37989-002

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	670	520		1	78	46-114	12/09/2019 1229
Acenaphthylene	670	550		1	83	44-122	12/09/2019 1229
Acetophenone	670	480		1	72	48-111	12/09/2019 1229
Anthracene	670	520		1	78	50-119	12/09/2019 1229
Atrazine	670	600		1	90	48-116	12/09/2019 1229
Benzaldehyde	670	330		1	49	10-110	12/09/2019 1229
Benzo(a)anthracene	670	570		1	86	47-121	12/09/2019 1229
Benzo(a)pyrene	670	600		1	90	55-134	12/09/2019 1229
Benzo(b)fluoranthene	670	560		1	83	28-139	12/09/2019 1229
Benzo(g,h,i)perylene	670	520		1	78	36-125	12/09/2019 1229
Benzo(k)fluoranthene	670	570		1	85	47-130	12/09/2019 1229
1,1'-Biphenyl	670	540		1	80	49-110	12/09/2019 1229
4-Bromophenyl phenyl ether	670	500		1	74	46-118	12/09/2019 1229
Butyl benzyl phthalate	670	500		1	74	46-128	12/09/2019 1229
Caprolactam	670	530		1	79	43-121	12/09/2019 1229
Carbazole	670	520		1	78	47-128	12/09/2019 1229
bis (2-Chloro-1-methylethyl) ether	670	460		1	70	31-102	12/09/2019 1229
4-Chloro-3-methyl phenol	670	490		1	73	49-118	12/09/2019 1229
4-Chloroaniline	670	320		1	48	17-106	12/09/2019 1229
bis(2-Chloroethoxy)methane	670	440		1	67	39-108	12/09/2019 1229
bis(2-Chloroethyl)ether	670	540		1	81	32-105	12/09/2019 1229
2-Chloronaphthalene	670	530		1	80	31-127	12/09/2019 1229
2-Chlorophenol	670	580		1	87	37-106	12/09/2019 1229
4-Chlorophenyl phenyl ether	670	580		1	87	47-116	12/09/2019 1229
Chrysene	670	560		1	85	45-126	12/09/2019 1229
Dibenzo(a,h)anthracene	670	550		1	83	45-122	12/09/2019 1229
Dibenzofuran	670	510		1	77	45-112	12/09/2019 1229
3,3'-Dichlorobenzidine	670	450		1	67	10-119	12/09/2019 1229
2,4-Dichlorophenol	670	540		1	80	41-113	12/09/2019 1229
Diethylphthalate	670	570		1	85	49-123	12/09/2019 1229
Dimethyl phthalate	670	540		1	81	48-120	12/09/2019 1229
2,4-Dimethylphenol	670	720		1	108	33-123	12/09/2019 1229
Di-n-butyl phthalate	670	500		1	75	51-129	12/09/2019 1229
4,6-Dinitro-2-methylphenol	670	460		1	69	40-130	12/09/2019 1229
2,4-Dinitrophenol	1300	860		1	65	10-113	12/09/2019 1229
2,4-Dinitrotoluene	670	590		1	88	48-124	12/09/2019 1229
2,6-Dinitrotoluene	670	530		1	79	47-125	12/09/2019 1229
Di-n-octylphthalate	670	540		1	81	49-142	12/09/2019 1229
bis(2-Ethylhexyl)phthalate	670	520		1	78	45-128	12/09/2019 1229
Fluoranthene	670	660		1	98	50-123	12/09/2019 1229
Fluorene	670	510		1	76	48-117	12/09/2019 1229
Hexachlorobenzene	670	510		1	77	44-122	12/09/2019 1229
Hexachlorobutadiene	670	550		1	82	33-103	12/09/2019 1229
Hexachlorocyclopentadiene	3300	2700		1	82	18-121	12/09/2019 1229

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37989-002

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	670	610		1	92	30-96	12/09/2019 1229
Indeno(1,2,3-c,d)pyrene	670	550		1	82	45-123	12/09/2019 1229
Isophorone	670	530		1	79	41-113	12/09/2019 1229
2-Methylnaphthalene	670	510		1	76	40-106	12/09/2019 1229
2-Methylphenol	670	660		1	100	32-107	12/09/2019 1229
3+4-Methylphenol	670	610		1	91	39-108	12/09/2019 1229
Naphthalene	670	470		1	70	36-110	12/09/2019 1229
2-Nitroaniline	670	590		1	88	45-123	12/09/2019 1229
3-Nitroaniline	670	480		1	72	24-127	12/09/2019 1229
4-Nitroaniline	670	670		1	100	48-127	12/09/2019 1229
Nitrobenzene	670	450		1	68	33-114	12/09/2019 1229
2-Nitrophenol	670	500		1	75	35-108	12/09/2019 1229
4-Nitrophenol	1300	1100		1	80	18-154	12/09/2019 1229
N-Nitrosodi-n-propylamine	670	580		1	87	32-115	12/09/2019 1229
N-Nitrosodiphenylamine (Diphenylamine)	670	480		1	72	53-150	12/09/2019 1229
Pentachlorophenol	1300	890		1	66	27-138	12/09/2019 1229
Phenanthrene	670	480		1	72	49-117	12/09/2019 1229
Phenol	670	580		1	87	36-108	12/09/2019 1229
Pyrene	670	540		1	81	47-119	12/09/2019 1229
2,4,5-Trichlorophenol	670	580		1	87	46-122	12/09/2019 1229
2,4,6-Trichlorophenol	670	580		1	87	38-115	12/09/2019 1229
Surrogate	Q	% Rec	Acceptance Limit				
2-Fluorobiphenyl		78	24-137				
2-Fluorophenol		77	16-136				
Nitrobenzene-d5		71	12-144				
Phenol-d5		87	26-148				
Terphenyl-d14		88	20-127				
2,4,6-Tribromophenol		72	27-128				

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acenaphthene	ND	660	270	N	5	41	46-114	12/11/2019 2210
Acenaphthylene	ND	660	310		5	48	44-122	12/11/2019 2210
Acetophenone	ND	660	420		5	63	48-111	12/11/2019 2210
Anthracene	ND	660	270	N	5	41	50-119	12/11/2019 2210
Atrazine	ND	660	320		5	49	48-116	12/11/2019 2210
Benzaldehyde	ND	660	440		5	66	10-110	12/11/2019 2210
Benzo(a)anthracene	ND	660	360		5	54	47-121	12/11/2019 2210
Benzo(a)pyrene	ND	660	380		5	57	55-134	12/11/2019 2210
Benzo(b)fluoranthene	ND	660	390		5	59	28-139	12/11/2019 2210
Benzo(g,h,i)perylene	ND	660	280		5	43	36-125	12/11/2019 2210
Benzo(k)fluoranthene	ND	660	350		5	54	47-130	12/11/2019 2210
1,1'-Biphenyl	ND	660	280	N	5	42	49-110	12/11/2019 2210
4-Bromophenyl phenyl ether	ND	660	270	N	5	42	46-118	12/11/2019 2210
Butyl benzyl phthalate	ND	660	350		5	52	46-128	12/11/2019 2210
Caprolactam	ND	660	320		5	48	43-121	12/11/2019 2210
Carbazole	ND	660	280	N	5	43	47-128	12/11/2019 2210
bis (2-Chloro-1-methylethyl) ether	ND	660	700	N	5	107	31-102	12/11/2019 2210
4-Chloro-3-methyl phenol	ND	660	330		5	51	49-118	12/11/2019 2210
4-Chloroaniline	ND	660	110	N	5	16	17-106	12/11/2019 2210
bis(2-Chloroethoxy)methane	ND	660	280		5	42	39-108	12/11/2019 2210
bis(2-Chloroethyl)ether	ND	660	290		5	44	32-105	12/11/2019 2210
2-Chloronaphthalene	ND	660	270		5	42	31-127	12/11/2019 2210
2-Chlorophenol	ND	660	370		5	57	37-106	12/11/2019 2210
4-Chlorophenyl phenyl ether	ND	660	330		5	50	47-116	12/11/2019 2210
Chrysene	ND	660	320		5	49	45-126	12/11/2019 2210
Dibenzo(a,h)anthracene	ND	660	310		5	47	45-122	12/11/2019 2210
Dibenzofuran	ND	660	320		5	48	45-112	12/11/2019 2210
3,3'-Dichlorobenzidine	ND	660	ND	N	5	0.00	10-119	12/11/2019 2210
2,4-Dichlorophenol	ND	660	310		5	48	41-113	12/11/2019 2210
Diethylphthalate	ND	660	290	N	5	44	49-123	12/11/2019 2210
Dimethyl phthalate	ND	660	340		5	52	48-120	12/11/2019 2210
2,4-Dimethylphenol	ND	660	400		5	61	33-123	12/11/2019 2210
Di-n-butyl phthalate	ND	660	280	N	5	42	51-129	12/11/2019 2210
4,6-Dinitro-2-methylphenol	ND	660	490		5	74	40-130	12/11/2019 2210
2,4-Dinitrophenol	ND	1300	1000		5	80	45-127	12/11/2019 2210
2,4-Dinitrotoluene	ND	660	280	N	5	43	48-124	12/11/2019 2210
2,6-Dinitrotoluene	ND	660	360		5	55	47-125	12/11/2019 2210
Di-n-octylphthalate	ND	660	370		5	57	49-142	12/11/2019 2210
bis(2-Ethylhexyl)phthalate	ND	660	340		5	51	45-128	12/11/2019 2210
Fluoranthene	ND	660	370		5	57	50-123	12/11/2019 2210
Fluorene	ND	660	270	N	5	41	48-117	12/11/2019 2210
Hexachlorobenzene	ND	660	260	N	5	40	44-122	12/11/2019 2210
Hexachlorobutadiene	ND	660	340		5	51	33-103	12/11/2019 2210
Hexachlorocyclopentadiene	ND	3300	2300		5	69	18-121	12/11/2019 2210

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MS

Sample ID: UL02023-003MS

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Hexachloroethane	ND	660	340		5	51	30-96	12/11/2019 2210
Indeno(1,2,3-c,d)pyrene	ND	660	290	N	5	44	45-123	12/11/2019 2210
Isophorone	ND	660	310		5	47	41-113	12/11/2019 2210
2-Methylnaphthalene	ND	660	260		5	40	40-106	12/11/2019 2210
2-Methylphenol	ND	660	420		5	64	32-107	12/11/2019 2210
3+4-Methylphenol	ND	660	370		5	56	39-108	12/11/2019 2210
Naphthalene	ND	660	290		5	44	36-110	12/11/2019 2210
2-Nitroaniline	ND	660	260	N	5	39	45-123	12/11/2019 2210
3-Nitroaniline	ND	660	ND	N	5	0.00	24-127	12/11/2019 2210
4-Nitroaniline	ND	660	ND	N	5	0.00	48-127	12/11/2019 2210
Nitrobenzene	ND	660	300		5	45	33-114	12/11/2019 2210
2-Nitrophenol	ND	660	270		5	40	35-108	12/11/2019 2210
4-Nitrophenol	ND	1300	1300		5	101	18-154	12/11/2019 2210
N-Nitrosodi-n-propylamine	ND	660	400		5	61	32-115	12/11/2019 2210
N-Nitrosodiphenylamine (Diphenylamine)	ND	660	180	N	5	27	53-150	12/11/2019 2210
Pentachlorophenol	ND	1300	500		5	38	27-138	12/11/2019 2210
Phenanthrene	ND	660	290	N	5	44	49-117	12/11/2019 2210
Phenol	ND	660	330		5	50	36-108	12/11/2019 2210
Pyrene	ND	660	370		5	56	47-119	12/11/2019 2210
2,4,5-Trichlorophenol	ND	660	320		5	48	46-122	12/11/2019 2210
2,4,6-Trichlorophenol	ND	660	310		5	47	38-115	12/11/2019 2210
Surrogate	Q	% Rec	Acceptance Limit					
2-Fluorobiphenyl		41	24-137					
2-Fluorophenol		40	16-136					
Nitrobenzene-d5		41	12-144					
Phenol-d5		52	26-148					
Terphenyl-d14		52	20-127					
2,4,6-Tribromophenol		41	27-128					

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acenaphthene	ND	650	270	N	5	41	2.5	46-114	30	12/11/2019 2234
Acenaphthylene	ND	650	300		5	46	5.6	44-122	30	12/11/2019 2234
Acetophenone	ND	650	330		5	50	24	48-111	40	12/11/2019 2234
Anthracene	ND	650	280	N	5	43	4.7	50-119	30	12/11/2019 2234
Atrazine	ND	650	290	N	5	44	11	48-116	40	12/11/2019 2234
Benzaldehyde	ND	650	330		5	50	28	10-110	40	12/11/2019 2234
Benzo(a)anthracene	ND	650	360		5	55	0.23	47-121	30	12/11/2019 2234
Benzo(a)pyrene	ND	650	350	N	5	53	8.2	55-134	30	12/11/2019 2234
Benzo(b)fluoranthene	ND	650	370		5	57	3.8	28-139	30	12/11/2019 2234
Benzo(g,h,i)perylene	ND	650	270		5	41	5.1	36-125	30	12/11/2019 2234
Benzo(k)fluoranthene	ND	650	330		5	51	6.5	47-130	30	12/11/2019 2234
1,1'-Biphenyl	ND	650	280	N	5	42	1.4	49-110	40	12/11/2019 2234
4-Bromophenyl phenyl ether	ND	650	300		5	46	9.2	46-118	40	12/11/2019 2234
Butyl benzyl phthalate	ND	650	310		5	48	10	46-128	40	12/11/2019 2234
Caprolactam	ND	650	290		5	45	8.8	43-121	40	12/11/2019 2234
Carbazole	ND	650	300	N	5	45	4.4	47-128	40	12/11/2019 2234
bis (2-Chloro-1-methylethyl) ether	ND	650	430	+	5	67	47	31-102	40	12/11/2019 2234
4-Chloro-3-methyl phenol	ND	650	280	N	5	43	18	49-118	40	12/11/2019 2234
4-Chloroaniline	ND	650	120		5	19	13	17-106	40	12/11/2019 2234
bis(2-Chloroethoxy)methane	ND	650	230	N	5	36	18	39-108	40	12/11/2019 2234
bis(2-Chloroethyl)ether	ND	650	300		5	46	3.0	32-105	40	12/11/2019 2234
2-Chloronaphthalene	ND	650	290		5	45	6.8	31-127	40	12/11/2019 2234
2-Chlorophenol	ND	650	320		5	49	16	37-106	40	12/11/2019 2234
4-Chlorophenyl phenyl ether	ND	650	300		5	47	8.9	47-116	40	12/11/2019 2234
Chrysene	ND	650	350		5	55	8.9	45-126	30	12/11/2019 2234
Dibenzo(a,h)anthracene	ND	650	280	N	5	43	11	45-122	30	12/11/2019 2234
Dibenzofuran	ND	650	300		5	46	6.5	45-112	40	12/11/2019 2234
3,3'-Dichlorobenzidine	ND	650	ND	N	5	0.00	0.00	10-119	40	12/11/2019 2234
2,4-Dichlorophenol	ND	650	340		5	52	6.7	41-113	40	12/11/2019 2234
Diethylphthalate	ND	650	290	N	5	45	0.98	49-123	40	12/11/2019 2234
Dimethyl phthalate	ND	650	300	N	5	46	13	48-120	40	12/11/2019 2234
2,4-Dimethylphenol	ND	650	350		5	53	14	33-123	40	12/11/2019 2234
Di-n-butyl phthalate	ND	650	260	N	5	40	7.1	51-129	40	12/11/2019 2234
4,6-Dinitro-2-methylphenol	ND	650	530		5	81	8.0	40-130	40	12/11/2019 2234
2,4-Dinitrophenol	ND	1300	1100		5	85	4.7	45-127	40	12/11/2019 2234
2,4-Dinitrotoluene	ND	650	300	N	5	47	6.6	48-124	40	12/11/2019 2234
2,6-Dinitrotoluene	ND	650	360		5	55	1.9	47-125	40	12/11/2019 2234
Di-n-octylphthalate	ND	650	340		5	52	9.3	49-142	40	12/11/2019 2234
bis(2-Ethylhexyl)phthalate	ND	650	300		5	46	12	45-128	40	12/11/2019 2234
Fluoranthene	ND	650	330		5	50	14	50-123	30	12/11/2019 2234
Fluorene	ND	650	290	N	5	45	6.1	48-117	30	12/11/2019 2234
Hexachlorobenzene	ND	650	240	N	5	38	7.8	44-122	40	12/11/2019 2234
Hexachlorobutadiene	ND	650	280		5	44	17	33-103	40	12/11/2019 2234
Hexachlorocyclopentadiene	ND	3200	2200		5	68	2.7	18-121	40	12/11/2019 2234

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MSD

Sample ID: UL02023-003MD

Matrix: Solid

Batch: 37989

Prep Method: 3546

Analytical Method: 8270D

Prep Date: 12/05/2019 1305

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Hexachloroethane	ND	650	300		5	46	12	30-96	40	12/11/2019 2234
Indeno(1,2,3-c,d)pyrene	ND	650	300		5	46	3.3	45-123	30	12/11/2019 2234
Isophorone	ND	650	310		5	47	0.33	41-113	40	12/11/2019 2234
2-Methylnaphthalene	ND	650	300		5	46	12	40-106	30	12/11/2019 2234
2-Methylphenol	ND	650	330		5	51	23	32-107	40	12/11/2019 2234
3+4-Methylphenol	ND	650	350		5	55	3.9	39-108	40	12/11/2019 2234
Naphthalene	ND	650	290		5	45	2.6	36-110	30	12/11/2019 2234
2-Nitroaniline	ND	650	200	N	5	31	23	45-123	40	12/11/2019 2234
3-Nitroaniline	ND	650	ND	N	5	0.00	0.00	24-127	40	12/11/2019 2234
4-Nitroaniline	ND	650	ND	N	5	0.00	0.00	48-127	40	12/11/2019 2234
Nitrobenzene	ND	650	280		5	44	4.4	33-114	40	12/11/2019 2234
2-Nitrophenol	ND	650	320		5	49	18	35-108	40	12/11/2019 2234
4-Nitrophenol	ND	1300	1200		5	96	6.5	18-154	40	12/11/2019 2234
N-Nitrosodi-n-propylamine	ND	650	310		5	48	24	32-115	40	12/11/2019 2234
N-Nitrosodiphenylamine (Diphenylamine)	ND	650	170	N	5	27	3.1	53-150	40	12/11/2019 2234
Pentachlorophenol	ND	1300	440		5	34	13	27-138	40	12/11/2019 2234
Phenanthrene	ND	650	290	N	5	45	0.032	49-117	30	12/11/2019 2234
Phenol	ND	650	280		5	43	16	36-108	40	12/11/2019 2234
Pyrene	ND	650	340		5	52	8.0	47-119	30	12/11/2019 2234
2,4,5-Trichlorophenol	ND	650	300		5	46	6.7	46-122	40	12/11/2019 2234
2,4,6-Trichlorophenol	ND	650	300		5	47	2.3	38-115	40	12/11/2019 2234
Surrogate	Q	% Rec	Acceptance Limit							
2-Fluorobiphenyl		38	24-137							
2-Fluorophenol		38	16-136							
Nitrobenzene-d5		38	12-144							
Phenol-d5		48	26-148							
Terphenyl-d14		50	20-127							
2,4,6-Tribromophenol	N	25	27-128							

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
1,1'-Biphenyl	ND		1	4.0	ug/L	12/08/2019 0350
2,4,5-Trichlorophenol	ND		1	4.0	ug/L	12/08/2019 0350
2,4,6-Trichlorophenol	ND		1	4.0	ug/L	12/08/2019 0350
2,4-Dichlorophenol	ND		1	8.0	ug/L	12/08/2019 0350
2,4-Dimethylphenol	ND		1	4.0	ug/L	12/08/2019 0350
2,4-Dinitrophenol	ND		1	20	ug/L	12/08/2019 0350
2,4-Dinitrotoluene	ND		1	8.0	ug/L	12/08/2019 0350
2,6-Dinitrotoluene	ND		1	8.0	ug/L	12/08/2019 0350
2-Chloronaphthalene	ND		1	4.0	ug/L	12/08/2019 0350
2-Chlorophenol	ND		1	4.0	ug/L	12/08/2019 0350
2-Methylnaphthalene	ND		1	0.80	ug/L	12/08/2019 0350
2-Methylphenol	ND		1	4.0	ug/L	12/08/2019 0350
2-Nitroaniline	ND		1	8.0	ug/L	12/08/2019 0350
2-Nitrophenol	ND		1	4.0	ug/L	12/08/2019 0350
3,3'-Dichlorobenzidine	ND		1	4.0	ug/L	12/08/2019 0350
3+4-Methylphenol	ND		1	4.0	ug/L	12/08/2019 0350
3-Nitroaniline	ND		1	8.0	ug/L	12/08/2019 0350
4,6-Dinitro-2-methylphenol	ND		1	20	ug/L	12/08/2019 0350
4-Bromophenyl phenyl ether	ND		1	4.0	ug/L	12/08/2019 0350
4-Chloro-3-methyl phenol	ND		1	4.0	ug/L	12/08/2019 0350
4-Chloroaniline	ND		1	8.0	ug/L	12/08/2019 0350
4-Chlorophenyl phenyl ether	ND		1	4.0	ug/L	12/08/2019 0350
4-Nitroaniline	ND		1	8.0	ug/L	12/08/2019 0350
4-Nitrophenol	ND		1	20	ug/L	12/08/2019 0350
Acenaphthene	ND		1	0.80	ug/L	12/08/2019 0350
Acenaphthylene	ND		1	0.80	ug/L	12/08/2019 0350
Acetophenone	ND		1	4.0	ug/L	12/08/2019 0350
Anthracene	ND		1	0.80	ug/L	12/08/2019 0350
Atrazine	ND		1	4.0	ug/L	12/08/2019 0350
Benzaldehyde	ND		1	8.0	ug/L	12/08/2019 0350
Benzo(a)anthracene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(a)pyrene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(b)fluoranthene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(g,h,i)perylene	ND		1	0.80	ug/L	12/08/2019 0350
Benzo(k)fluoranthene	ND		1	0.80	ug/L	12/08/2019 0350
bis (2-Chloro-1-methylethyl) ether	ND		1	4.0	ug/L	12/08/2019 0350
bis(2-Chloroethoxy)methane	ND		1	4.0	ug/L	12/08/2019 0350
bis(2-Chloroethyl)ether	ND		1	4.0	ug/L	12/08/2019 0350
bis(2-Ethylhexyl)phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Butyl benzyl phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Caprolactam	ND		1	8.0	ug/L	12/08/2019 0350
Carbazole	ND		1	4.0	ug/L	12/08/2019 0350
Chrysene	ND		1	0.80	ug/L	12/08/2019 0350
Dibenzo(a,h)anthracene	ND		1	0.80	ug/L	12/08/2019 0350

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - MB

Sample ID: UQ37996-001

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Dibenzofuran	ND		1	4.0	ug/L	12/08/2019 0350
Diethylphthalate	ND		1	4.0	ug/L	12/08/2019 0350
Dimethyl phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Di-n-butyl phthalate	ND		1	4.0	ug/L	12/08/2019 0350
Di-n-octylphthalate	ND		1	4.0	ug/L	12/08/2019 0350
Fluoranthene	ND		1	0.80	ug/L	12/08/2019 0350
Fluorene	ND		1	0.80	ug/L	12/08/2019 0350
Hexachlorobenzene	ND		1	4.0	ug/L	12/08/2019 0350
Hexachlorobutadiene	ND		1	4.0	ug/L	12/08/2019 0350
Hexachlorocyclopentadiene	ND		1	20	ug/L	12/08/2019 0350
Hexachloroethane	ND		1	4.0	ug/L	12/08/2019 0350
Indeno(1,2,3-c,d)pyrene	ND		1	0.80	ug/L	12/08/2019 0350
Isophorone	ND		1	4.0	ug/L	12/08/2019 0350
Naphthalene	ND		1	0.80	ug/L	12/08/2019 0350
Nitrobenzene	ND		1	4.0	ug/L	12/08/2019 0350
N-Nitrosodi-n-propylamine	ND		1	4.0	ug/L	12/08/2019 0350
N-Nitrosodiphenylamine (Diphenylamine)	ND		1	4.0	ug/L	12/08/2019 0350
Pentachlorophenol	ND		1	20	ug/L	12/08/2019 0350
Phenanthrene	ND		1	0.80	ug/L	12/08/2019 0350
Phenol	ND		1	4.0	ug/L	12/08/2019 0350
Pyrene	ND		1	0.80	ug/L	12/08/2019 0350

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		88	37-129
2-Fluorophenol		52	24-127
Nitrobenzene-d5		92	38-127
Phenol-d5		78	28-128
Terphenyl-d14		114	10-148
2,4,6-Tribromophenol		80	35-144

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
1,1'-Biphenyl	40	35		1	87	30-130	12/08/2019 0415
2,4,5-Trichlorophenol	40	35		1	88	30-123	12/08/2019 0415
2,4,6-Trichlorophenol	40	36		1	90	30-130	12/08/2019 0415
2,4-Dichlorophenol	40	35		1	88	30-121	12/08/2019 0415
2,4-Dimethylphenol	40	34		1	86	20-125	12/08/2019 0415
2,4-Dinitrophenol	80	72		1	90	11-126	12/08/2019 0415
2,4-Dinitrotoluene	40	38		1	96	30-130	12/08/2019 0415
2,6-Dinitrotoluene	40	37		1	91	30-130	12/08/2019 0415
2-Chloronaphthalene	40	35		1	87	30-130	12/08/2019 0415
2-Chlorophenol	40	34		1	86	30-130	12/08/2019 0415
2-Methylnaphthalene	40	33		1	83	40-132	12/08/2019 0415
2-Methylphenol	40	35		1	88	30-130	12/08/2019 0415
2-Nitroaniline	40	40		1	101	30-130	12/08/2019 0415
2-Nitrophenol	40	36		1	89	30-130	12/08/2019 0415
3,3'-Dichlorobenzidine	40	28		1	70	10-126	12/08/2019 0415
3+4-Methylphenol	40	36		1	89	30-130	12/08/2019 0415
3-Nitroaniline	40	28		1	71	30-130	12/08/2019 0415
4,6-Dinitro-2-methylphenol	40	41		1	101	30-130	12/08/2019 0415
4-Bromophenyl phenyl ether	40	35		1	87	30-124	12/08/2019 0415
4-Chloro-3-methyl phenol	40	37		1	93	30-123	12/08/2019 0415
4-Chloroaniline	40	29		1	72	12-157	12/08/2019 0415
4-Chlorophenyl phenyl ether	40	35		1	87	30-121	12/08/2019 0415
4-Nitroaniline	40	38		1	96	30-135	12/08/2019 0415
4-Nitrophenol	80	75		1	94	30-130	12/08/2019 0415
Acenaphthene	40	36		1	89	30-122	12/08/2019 0415
Acenaphthylene	40	36		1	89	30-130	12/08/2019 0415
Acetophenone	40	36		1	90	30-130	12/08/2019 0415
Anthracene	40	37		1	91	30-123	12/08/2019 0415
Atrazine	40	37		1	92	30-130	12/08/2019 0415
Benzaldehyde	40	22		1	55	20-115	12/08/2019 0415
Benzo(a)anthracene	40	36		1	90	40-125	12/08/2019 0415
Benzo(a)pyrene	40	35		1	87	40-128	12/08/2019 0415
Benzo(b)fluoranthene	40	35		1	88	30-130	12/08/2019 0415
Benzo(g,h,i)perylene	40	36		1	89	30-130	12/08/2019 0415
Benzo(k)fluoranthene	40	35		1	87	30-130	12/08/2019 0415
bis (2-Chloro-1-methylethyl) ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Chloroethoxy)methane	40	36		1	90	30-130	12/08/2019 0415
bis(2-Chloroethyl)ether	40	37		1	92	30-130	12/08/2019 0415
bis(2-Ethylhexyl)phthalate	40	32		1	81	30-130	12/08/2019 0415
Butyl benzyl phthalate	40	39		1	97	30-130	12/08/2019 0415
Caprolactam	40	39		1	97	30-130	12/08/2019 0415
Carbazole	40	35		1	88	30-130	12/08/2019 0415
Chrysene	40	36		1	91	30-130	12/08/2019 0415
Dibenzo(a,h)anthracene	40	35		1	88	30-130	12/08/2019 0415

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Semivolatile Organic Compounds by GC/MS - LCS

Sample ID: UQ37996-002

Matrix: Aqueous

Batch: 37996

Prep Method: 3520C

Analytical Method: 8270D

Prep Date: 12/05/2019 1618

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Dibenzofuran	40	35		1	88	30-118	12/08/2019 0415
Diethylphthalate	40	37		1	93	40-125	12/08/2019 0415
Dimethyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-butyl phthalate	40	37		1	93	40-127	12/08/2019 0415
Di-n-octylphthalate	40	30		1	75	30-130	12/08/2019 0415
Fluoranthene	40	36		1	89	40-128	12/08/2019 0415
Fluorene	40	36		1	89	30-124	12/08/2019 0415
Hexachlorobenzene	40	36		1	90	30-125	12/08/2019 0415
Hexachlorobutadiene	40	31		1	78	24-110	12/08/2019 0415
Hexachlorocyclopentadiene	200	150		1	73	22-122	12/08/2019 0415
Hexachloroethane	40	32		1	79	30-130	12/08/2019 0415
Indeno(1,2,3-c,d)pyrene	40	35		1	87	30-130	12/08/2019 0415
Isophorone	40	38		1	95	30-130	12/08/2019 0415
Naphthalene	40	34		1	84	30-130	12/08/2019 0415
Nitrobenzene	40	39		1	98	30-130	12/08/2019 0415
N-Nitrosodi-n-propylamine	40	38		1	94	30-130	12/08/2019 0415
N-Nitrosodiphenylamine (Diphenylamine)	40	36		1	89	30-123	12/08/2019 0415
Pentachlorophenol	80	65		1	81	30-130	12/08/2019 0415
Phenanthrene	40	36		1	90	40-123	12/08/2019 0415
Phenol	40	36		1	89	30-130	12/08/2019 0415
Pyrene	40	37		1	93	40-126	12/08/2019 0415

Surrogate	Q	% Rec	Acceptance Limit
2-Fluorobiphenyl		86	37-129
2-Fluorophenol		82	24-127
Nitrobenzene-d5		89	38-127
Phenol-d5		87	28-128
Terphenyl-d14		101	10-148
2,4,6-Tribromophenol		90	35-144

LOQ = Limit of Quantitation

P = The RPD between two GC columns exceeds 40%

N = Recovery is out of criteria

DL = Detection Limit

J = Estimated result < LOQ and ≥ DL

+ = RPD is out of criteria

LOD = Limit of Detection

ND = Not detected at or above the LOQ

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



Chain of Custody  
and  
Miscellaneous Documents

101499  
Number

**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**

Client: Westinghouse Address: 5801 Bluff Rd. City: Moncks State: SC Zip Code: \_\_\_\_\_

Project Name: R.I. Implementation

Project No.: \_\_\_\_\_ Date: \_\_\_\_\_

Report to Contact: Diana Joyner Telephone No. / Email: 803 647 1426 Quote No.: \_\_\_\_\_

Sampler's Signature: [Signature] Analysis (Attach list if more than one is needed): \_\_\_\_\_

Printed Name: [Name] Date: \_\_\_\_\_

Matrix: \_\_\_\_\_

No. of Containers by Preservative Type: \_\_\_\_\_

Sample ID / Description (Containers for each sample may be combined on this line)	Date	Matrix			No. of Containers by Preservative Type				Possible Hazard Identification Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>
		Soil	Water	Sludge	None	Other	Other	Other	
SED-54 0-6"	12-2-19	X			1				VOC's
SED-54 6-12"		X			1				VOC's
SED-55 0-6"		X			1				VOC's
SED-55-MS 0-6"		X			1				VOC's
SED-55-MSD 0-6"		X			1				VOC's
SED-55 6-12"		X			1				VOC's
SED-56 0-6"		X			1				VOC's
SED-56-DUP 0-6"		X			1				VOC's
SED-56 6-12"		X			1				VOC's
EB-01-120219		X			3				VOC's

Turn Around Time Required (Prior lab approval required for expedited TAT): \_\_\_\_\_

Standard  Rush (Specify) \_\_\_\_\_

1. Requisitioned by: [Signature] Date: 12-2-19 Time: 1418

2. Requisitioned by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

3. Requisitioned by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

4. Requisitioned by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

CC Requirements (Specify): \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Date: 12-19 Time: 1418

LAB USE ONLY  
Received on ice (Circle)  No  Yes  Receptal Temp. 1-3 °C

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-Final/Client Copy

Document Number: F-AD-133 Effective Date: 08-01-2014

# SHEALY ENVIRONMENTAL SERVICES, INC.

Shealy Environmental Services, Inc.  
Document Number: ME0018C-14

Page 1 of 1  
Effective Date: 8/2/2018

## Sample Receipt Checklist (SRC)

Client: WESTINGHOUSE Cooler Inspected by/date: MEC / 12/2/19 Lot #: UL02023

Means of receipt: <input type="checkbox"/> SESI <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>19-2044</u> <u>1.3 / 1.3 °C</u> <u>NA / NA °C</u> <u>NA / NA °C</u> <u>NA / NA °C</u>	
Method: <input checked="" type="checkbox"/> Temperature Blank <input 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>22261</u>
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH using SR # <u>NA</u> . Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Sample(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>5</sub> ) with Shealy ID: <u>NA</u> .	
SR barcode labels applied by: <u>MEC/JSH</u> Date: <u>12/2/19</u>	

Comments:

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October 22, 2019

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

Re: ENV-CONSENTA  
Work Order: 485262

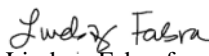
Dear Ms. Logsdon:

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

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

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

Sincerely,

  
Lindsay Fabra for  
Hope Taylor  
Project Manager

Purchase Order: 4500778461  
Enclosures



## GEL LABORATORIES LLC

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

### Certificate of Analysis Report for

WNUC009 Westinghouse Electric Co, LLC

Client SDG: 485262 GEL Work Order: 485262

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

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

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

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

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

Reviewed by \_\_\_\_\_

*Ludwig Fabra*

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SW-22

Project: WNUC01519

Sample ID: 485262001

Client ID: WNUC009

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

Nutrient Analysis



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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SW-21

Project: WNUC01519

Sample ID: 485262003

Client ID: WNUC009

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SW-18

Project: WNUC01519

Sample ID: 485262006

Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		38.1	0.482	1.42	mg/kg	9.57	1	LXA2	08/09/19	2144	1905737	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury		40.3	5.55	16.6	ug/kg	55.9	1	MTM1	08/08/19	1544	1904595	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		1980000	9770	28700	ug/kg	96.9	1	TXT1	08/12/19	1825	1899047	3
Antimony	U	ND	474	2870	ug/kg	96.9	1					
Arsenic	J	3360	718	4310	ug/kg	96.9	1					
Barium		127000	144	718	ug/kg	96.9	1					
Beryllium		2090	144	718	ug/kg	96.9	1					
Cadmium	J	209	144	718	ug/kg	96.9	1					
Calcium		770000	11500	35900	ug/kg	96.9	1					
Chromium		29300	215	1440	ug/kg	96.9	1					
Cobalt		11800	215	718	ug/kg	96.9	1					
Copper		18500	431	2870	ug/kg	96.9	1					
Iron		2950000	11500	35900	ug/kg	96.9	1					
Lead		14400	474	2870	ug/kg	96.9	1					
Magnesium		2980000	12200	43100	ug/kg	96.9	1					
Manganese		268000	287	1440	ug/kg	96.9	1					
Nickel		11500	215	718	ug/kg	96.9	1					
Potassium		2010000	9190	35900	ug/kg	96.9	1					
Selenium	U	ND	718	4310	ug/kg	96.9	1					
Silver	U	ND	144	718	ug/kg	96.9	1					
Sodium		130000	10100	35900	ug/kg	96.9	1					
Vanadium		70500	144	718	ug/kg	96.9	1					
Zinc		46000	574	2870	ug/kg	96.9	1					
Thallium	U	ND	7180	28700	ug/kg	96.9	10	TXT1	08/12/19	1827	1899047	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-234	U	ND	2.88	14.4	ug/kg	97.3	2	PRB	08/12/19	0113	1898996	5
Uranium-235	J	18.3	2.88	20.2	ug/kg	97.3	2	PRB	08/12/19	1242	1898996	6
Uranium-238		2250	19.0	57.7	ug/kg	97.3	2					
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-23

Project: WNUC01519

Sample ID: 485262011

Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

Nutrient Analysis

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-24 Project: WNUC01519  
Sample ID: 485262012 Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
 Project: ENV-CONSENTA

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

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

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SW-14 Project: WNUC01519  
Sample ID: 485262017 Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



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Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "As Received"</b>												
Fluoride		0.226	0.033	0.100	mg/L		1	LXA2	08/09/19	2132	1905773	1
<b>Mercury Analysis-CVAA</b>												
<b>7470 Cold Vapor Mercury, Liquid "As Received"</b>												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	MTM1	08/08/19	1352	1904592	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3005A/6010D Metals Scan Liquid "As Received"</b>												
Aluminum		212	68.0	200	ug/L	1.00	1	TXT1	08/01/19	1220	1899016	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium		101	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium		7900	50.0	200	ug/L	1.00	1					
Chromium	J	1.25	1.00	10.0	ug/L	1.00	1					
Cobalt	J	2.35	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron		3820	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium		1490	110	300	ug/L	1.00	1					
Manganese		1860	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium		1850	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium		3780	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	J	1.79	1.00	5.00	ug/L	1.00	1					
Zinc	J	11.4	3.30	20.0	ug/L	1.00	1					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3010A/6020B "As Received"</b>												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	08/11/19	1808	1899001	4
Uranium-238	J	0.134	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	08/12/19	0031	1899001	5
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SW-13

Project: WNUC01519

Sample ID: 485262019

Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

Lc/LC: Critical Level

DL: Detection Limit

PF: Prep Factor

MDA: Minimum Detectable Activity

RL: Reporting Limit

MDC: Minimum Detectable Concentration

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

---

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

---

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

---

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

The following Prep Methods were performed:

---

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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

## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-25

Project: WNUC01519

Sample ID: 485262029

Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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



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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

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## Certificate of Analysis

Report Date: September 26, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		117	+/-4.47	0.404	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		4.98	+/-1.04	0.305	0.500	pCi/g							
Uranium-238		28.0	+/-2.19	0.329	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-3.44	+/-13.1	23.4	50.0	pCi/g			LXB3	08/04/19	1241	1898807	2

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			68.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.8	(15%-125%)

### Notes:

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

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

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		2.58	+/-0.549	0.234	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		0.181	+/-0.175	0.109	0.500	pCi/g							
Uranium-238		2.05	+/-0.489	0.206	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	5.62	+/-13.1	22.6	50.0	pCi/g			LXB3	08/04/19	1313	1898807	2
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**The following Prep Methods were performed:**

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

**The following Analytical Methods were performed:**

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.9	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Liquid "As Received"</b>													
Pct Uranium-235	U	0.00				percent		MP2	07/24/19	2142	1898796		1
Uranium-233/234	U	0.285	+/-0.274	0.380	0.500	pCi/L							
Uranium-235/236	U	0.0501	+/-0.143	0.150	0.500	pCi/L							
Uranium-238	U	0.159	+/-0.203	0.283	0.500	pCi/L							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Liquid "As Received"</b>													
Technetium-99	U	1.29	+/-27.9	48.4	50.0	pCi/L		JJ3	08/04/19	1017	1899271		2

The following Analytical Methods were performed:

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

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer		Alphaspec U, Liquid "As Received"			46.4	(15%-125%)
Technetium-99m Tracer		Liquid Scint Tc99, Liquid "As Received"			86.7	(15%-125%)

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

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			102	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.8	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

#### Alphaspec U, Liquid "As Received"

Pct Uranium-235		2.96				percent		MP2	07/24/19	2142	1898796	1
Uranium-233/234		2.35	+/-0.560	0.271	0.500	pCi/L						
Uranium-235/236		0.123	+/-0.163	0.123	0.500	pCi/L						
Uranium-238		0.626	+/-0.301	0.231	0.500	pCi/L						

### Rad Liquid Scintillation Analysis

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

Technetium-99	U	-0.321	+/-26.6	46.2	50.0	pCi/L		JJ3	08/04/19	1039	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			70.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			87.6	(15%-125%)

### Notes:

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

### Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			74	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.5	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

**Alphaspec U, Liquid "As Received"**

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

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Liquid "As Received"**

Technetium-99	U	13.6	+/-21.6	36.7	50.0	pCi/L			JJ3	08/05/19	0659	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			73.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.6	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			57.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			91.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			100	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

#### Alphaspec U, Liquid "As Received"

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

### Rad Liquid Scintillation Analysis

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

Technetium-99	U	-0.621	+/-24.7	43.0	50.0	pCi/L		JJ3	08/04/19	1123	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			87.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.8	(15%-125%)

### Notes:

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

### Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			110	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.7	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Liquid "As Received"</b>													
Pct Uranium-235		3.07				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234		3.34	+/-0.557	0.202	0.500	pCi/L							
Uranium-235/236		0.145	+/-0.141	0.087	0.500	pCi/L							
Uranium-238		0.710	+/-0.262	0.147	0.500	pCi/L							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Liquid "As Received"</b>													
Technetium-99	U	-3.1	+/-24.1	42.0	50.0	pCi/L			JJ3	08/04/19	1145	1899271	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			78.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.7	(15%-125%)

### Notes:

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

Column headers are defined as follows:

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



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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		14.9	+/-1.32	0.231	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236		0.678	+/-0.322	0.113	0.500	pCi/g							
Uranium-238		2.77	+/-0.573	0.146	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	4.94	+/-11.4	19.6	50.0	pCi/g			LXB3	08/04/19	1450	1898807	2

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			93.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94	(15%-125%)

### Notes:

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			74.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96	(15%-125%)

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			77.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.2	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

**Alphaspec U, Liquid "As Received"**

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

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Liquid "As Received"**

Technetium-99	U	-6.9	+/-24.4	42.8	50.0	pCi/L			JJ3	08/04/19	1230	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			72.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.5	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

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

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Liquid "As Received"</b>													
Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234		0.296	+/-0.221	0.271	0.500	pCi/L							
Uranium-235/236	U	0.0959	+/-0.147	0.193	0.500	pCi/L							
Uranium-238	U	0.105	+/-0.148	0.223	0.500	pCi/L							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Liquid "As Received"</b>													
Technetium-99	U	-1.83	+/-26.1	45.4	50.0	pCi/L			JJ3	08/04/19	1252	1899271	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			66.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			90.2	(15%-125%)

### Notes:

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

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.14	+/-0.390	0.231	0.500	pCi/g			MP2	08/01/19	0819	1898800	1
Uranium-235/236	U	0.00159	+/-0.118	0.262	0.500	pCi/g							
Uranium-238		0.742	+/-0.317	0.212	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-1.84	+/-17.1	30.2	50.0	pCi/g			LXB3	08/04/19	1538	1898807	2

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.2	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

#### Alphaspec U, Liquid "As Received"

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

### Rad Liquid Scintillation Analysis

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

Technetium-99	U	-9.94	+/-23.7	41.8	50.0	pCi/L		JJ3	08/04/19	1314	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			64.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			98.2	(15%-125%)

### Notes:

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

### Column headers are defined as follows:

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



# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Liquid "As Received"</b>													
Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	0.0905	+/-0.222	0.404	0.500	pCi/L							
Uranium-235/236	U	0.0804	+/-0.174	0.260	0.500	pCi/L							
Uranium-238	U	0.0508	+/-0.143	0.248	0.500	pCi/L							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Liquid "As Received"**

Technetium-99	U	-13	+/-24.5	43.3	50.0	pCi/L		JJ3	08/04/19	1337	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer	Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer		Alphaspec U, Liquid "As Received"			51.4	(15%-125%)
Technetium-99m Tracer		Liquid Scint Tc99, Liquid "As Received"			95.9	(15%-125%)

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

**Alphaspec U, Liquid "As Received"**

Pct Uranium-235	U	0.00				percent			MP2	07/24/19	2142	1898796	1
Uranium-233/234	U	0.0491	+/-0.148	0.277	0.500	pCi/L							
Uranium-235/236	U	0.00914	+/-0.0989	0.204	0.500	pCi/L							
Uranium-238	U	0.101	+/-0.146	0.228	0.500	pCi/L							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Liquid "As Received"**

Technetium-99	U	-3.49	+/-25.6	44.6	50.0	pCi/L			JJ3	08/04/19	1359	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			75.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			91.2	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			91.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

#### Alphaspec U, Liquid "As Received"

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

### Rad Liquid Scintillation Analysis

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

Technetium-99	U	-27.4	+/-26.1	47.1	50.0	pCi/L		JJ3	08/04/19	1421	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			69.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			88	(15%-125%)

### Notes:

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

### Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Liquid "As Received"</b>													
Pct Uranium-235	U	0.00				percent		MP2		07/24/19	2142	1898796	1
Uranium-233/234	U	0.094	+/-0.126	0.198	0.500	pCi/L							
Uranium-235/236	U	0.0578	+/-0.104	0.159	0.500	pCi/L							
Uranium-238	U	0.0361	+/-0.109	0.203	0.500	pCi/L							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Liquid "As Received"</b>													
Technetium-99	U	-7.06	+/-23.6	41.4	50.0	pCi/L		JJ3		08/04/19	1443	1899271	2

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			86.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			96.2	(15%-125%)

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		907	+/-17.9	0.715	0.500	pCi/g			MP2	08/01/19	0820	1898800	1
Uranium-235/236		41.1	+/-4.24	0.340	0.500	pCi/g							
Uranium-238		149	+/-7.25	0.768	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	8.55	+/-17.9	30.8	50.0	pCi/g			LXB3	08/04/19	1611	1898807	2

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			39.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			100	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

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

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		225	+/-3.73	0.183	0.500	pCi/g			MP2	08/01/19	1303	1898804	1
Uranium-235/236		11.9	+/-0.955	0.159	0.500	pCi/g							
Uranium-238		37.4	+/-1.52	0.0483	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	-10.7	+/-21.6	38.6	50.0	pCi/g			LXB3	08/04/19	1749	1898805	2
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**The following Prep Methods were performed:**

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

**The following Analytical Methods were performed:**

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

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

**Notes:**

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

Column headers are defined as follows:

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



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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

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

### Notes:

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

Column headers are defined as follows:

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

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

#### Alphaspec U, Liquid "As Received"

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

### Rad Liquid Scintillation Analysis

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

Technetium-99	U	-8.19	+/-25.5	44.7	50.0	pCi/L		JJ3	08/04/19	1506	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			57	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			93.6	(15%-125%)

### Notes:

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

### Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		0.658	+/-0.349	0.370	0.500	pCi/g			MP2	08/01/19	0820	1898800	1
Uranium-235/236	U	0.0235	+/-0.130	0.250	0.500	pCi/g							
Uranium-238		0.302	+/-0.229	0.223	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

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

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			93.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.2	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

#### Alphaspec U, Liquid "As Received"

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

### Rad Liquid Scintillation Analysis

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

Technetium-99	U	-1.49	+/-25.7	44.6	50.0	pCi/L		JJ3	08/04/19	1528	1899271	2
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The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			54.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.5	(15%-125%)

### Notes:

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

### Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: October 22, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

The following Prep Methods were performed:

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

The following Analytical Methods were performed:

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

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			98.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			100	(15%-125%)

**Notes:**

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

Column headers are defined as follows:

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

# GEL LABORATORIES LLC

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

## QC Summary

Report Date: September 26, 2019

Page 1 of 22

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 485262

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

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 485262

Page 2 of 22

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

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## QC Summary

Workorder: 485262

Page 3 of 22

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



# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 4 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 5 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 6 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 7 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 8 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 9 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 10 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 11 of 22

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



# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 12 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 13 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 14 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 15 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 16 of 22

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

# GEL LABORATORIES LLC

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

## QC Summary

Workorder: 485262

Page 17 of 22

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

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## QC Summary

Workorder: 485262

Page 18 of 22

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

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## QC Summary

Workorder: 485262

Page 19 of 22

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



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## QC Summary

Workorder: 485262

Page 20 of 22

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

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## QC Summary

Workorder: 485262

Page 21 of 22

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

**Notes:**

The Qualifiers in this report are defined as follows:

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

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## QC Summary

Workorder: 485262

Page 22 of 22

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

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

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

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

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

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

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## QC Summary

Report Date: September 26, 2019

Page 1 of 5

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

Contact: Ms. Cynthia Logsdon

Workorder: 485262

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

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## QC Summary

Workorder: 485262

Page 2 of 5

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

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## QC Summary

Workorder: 485262

Page 3 of 5

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

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## QC Summary

Workorder: 485262

Page 4 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1899271										
QC1204338360	LCS										
Technetium-99	854			779	pCi/L		91.2	(75%-125%)	JJ3	08/04/19	16:35
	Uncertainty			+/-45.9							
QC1204338358	MB										
Technetium-99			U	-9.04	pCi/L					08/04/19	15:50
	Uncertainty			+/-20.3							
Batch	1915173										
QC1204377126	485262003	DUP									
Technetium-99		U	6.54	U	-4.29	pCi/L	N/A		N/A	JJ3	09/22/19 07:34
	Uncertainty		+/-20.6		+/-21.2						
QC1204377127	LCS										
Technetium-99	854			840	pCi/L		98.4	(75%-125%)		09/22/19	07:51
	Uncertainty			+/-48.4							
QC1204377125	MB										
Technetium-99			U	18.8	pCi/L					09/22/19	07:18
	Uncertainty			+/-21.1							

**Notes:**

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

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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## QC Summary

Workorder: 485262

Page 5 of 5

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

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

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

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

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

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



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

**Metals**

**Product: Determination of Metals by ICP**

**Analytical Method: SW846 3005A/6010D**

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

**Analytical Batch: 1899016**

**Preparation Method: SW846 3005A**

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

**Preparation Batch: 1899015**

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

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

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

**Data Summary:**

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

**Product: Determination of Metals by ICP**

**Analytical Method: SW846 3050B/6010D**

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

**Analytical Batch:** 1899047

**Preparation Method:** SW846 3050B

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

**Preparation Batch:** 1899045

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

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

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

**Data Summary:**

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

**Quality Control (QC) Information**

**Matrix Spike (MS/MSD) Recovery Statement**

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204337824 (SED-22MS)	Manganese	67.2* (75%-125%)

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

**MS/MSD Relative Percent Difference (RPD) Statement**

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

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

**Technical Information**

**Preparation/Analytical Method Verification**

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

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples required dilutions in order to minimize suppression of thallium due to matrix interferences. 485262002 (SED-22), 485262004 (SED-21), 485262011 (SED-23), 485262012 (SED-24) and 485262020 (SED-13). Sample was diluted to ensure that silver concentration was within the linear calibration range of the instrument. 485262030 (SED-26).

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

**Product: Determination of Metals by ICP-MS**

**Analytical Method:** SW846 3050B/6020B

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

**Analytical Batch:** 1898996

**Preparation Method:** SW846 3050B

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

**Preparation Batch:** 1898995

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

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

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

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

**Data Summary:**

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

**Calibration Information**

**ICSA/ICSAB Statement**

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

**Technical Information**

**Preparation/Analytical Method Verification**

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

**Sample Dilutions**

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

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

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

**Product: Determination of Metals by ICP-MS**

**Analytical Method:** SW846 3010A/6020B

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

**Analytical Batch:** 1899001

**Preparation Method:** SW846 3010A

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

**Preparation Batch:** 1899000

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

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

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

**Data Summary:**

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

**Calibration Information**

**ICSA/ICSAB Statement**

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

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

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

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

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

**Data Summary:**

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

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

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

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

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

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

**Data Summary:**

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

## **General Chemistry**

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

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

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

1204349313 485262002(SED-22) Sample Duplicate (DUP)  
1204349315 485262002(SED-22) Matrix Spike (MS)

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

**Data Summary:**

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

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204349315 (SED-22MS)	37.6* (75%-125%)

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

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

**Analytical Batch:** 1903827

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

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

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

**Data Summary:**

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

**Technical Information**



### Sample Dilutions

The following samples 1204349352 (Non SDG 486599001DUP), 1204349353 (Non SDG 486599001PS) and 485262010 (SW-23) were diluted because target analyte concentrations exceeded the calibration range. Samples 1204349352 (Non SDG 486599001DUP) and 1204349353 (Non SDG 486599001PS) were diluted based on historical data. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	485262
	010
Fluoride	2X

### Sample Re-analysis

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

### Product: Ion Chromatography

Analytical Method: SW846 9056A

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

Analytical Batches: 1905737 and 1905736

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

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

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

### Data Summary:

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

### Quality Control (QC) Information

#### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204353693 (SED-15MS)	72.9* (75%-125%)

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

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

**Analytical Batch:** 1905773

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

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

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

**Data Summary:**

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

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

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

**Analytical Batches:** 1905785 and 1905784

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

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

485262036	DUP-01-071819
1204353775	Method Blank (MB)
1204353776	Laboratory Control Sample (LCS)
1204353777	485262026(SED-12) Sample Duplicate (DUP)
1204353779	485262026(SED-12) Matrix Spike (MS)

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

**Data Summary:**

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

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204353779 (SED-12MS)	23.9* (75%-125%)

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1 Modified

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

**Preparation Batch:** 1899590

**Preparation Method:** EPA 350.2 Modified Prep

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

**Preparation Batch:** 1899589

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

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

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

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

**Data Summary:**

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

**Technical Information**

**Sample Dilutions**

The following samples 1204339197 (SED-22DUP), 1204339199 (SED-22MS), 485262002 (SED-22), 485262004 (SED-21), 485262009 (SED-20), 485262011 (SED-23), 485262014 (SED-19), 485262022 (SED-11), 485262026 (SED-12), 485262029 (SED-25), 485262030 (SED-26) and 485262032 (SED-28) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

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

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1

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

**Preparation Batch:** 1899832

**Preparation Method:** EPA 350.1 Prep

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

**Preparation Batch:** 1899831

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

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

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

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

**Data Summary:**

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

**Technical Information**

**Sample Dilutions**

The following sample 485262015 (SW-16) was diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	485262
	015
Nitrogen, Ammonia	5X

**Sample Re-analysis**

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

**Radiochemistry**

**Product: Alphaspec U, Liquid**

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

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

**Analytical Batch: 1898796**

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

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

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

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

**Data Summary:**

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

**Product: Alphaspec U, Soil/Veg**

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

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

**Analytical Batch:** 1898800

**Preparation Method:** Dry Soil Prep

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

**Preparation Batch:** 1898477

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

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

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

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

**Data Summary:**

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

**Quality Control (QC) Information**

**Method Blank Criteria**

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

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

**Technical Information**

**Recounts**

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

**Miscellaneous Information**

**Additional Comments**

The tracer peak centroid for sample 1204337156 (LCS) is greater than 50 keV from the expected library energy value for the tracer; however, the tracer yield requirement was met and the tracer peak is within the tracer region of interest.

**Product: Alphaspec U, Soil/Veg**

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

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

**Analytical Batch:** 1898804

**Preparation Method:** Dry Soil Prep

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

**Preparation Batch:** 1898481

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
485262031	SED-27

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

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

**Data Summary:**

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

**Product: Dry Weight**

**Analytical Method:** ASTM D 2216 (Modified)

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

**Analytical Batch:** 1898477

**Preparation Method:** Dry Soil Prep

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

**Preparation Batch:** 1898477

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

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

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

**Data Summary:**

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



continuing calibration, instrument controls and process controls where applicable.

**Product: Dry Weight**

**Analytical Method:** ASTM D 2216 (Modified)

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

**Analytical Batch:** 1898481

**Preparation Method:** Dry Soil Prep

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

**Preparation Batch:** 1898481

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
485262031	SED-27
485262032	SED-28
1204336396	485262031(SED-27) Sample Duplicate (DUP)

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

**Data Summary:**

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

**Product: Liquid Scint Tc99, Soil**

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

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

**Analytical Batch:** 1898805

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

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

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

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this

report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Soil**

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

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

**Analytical Batch:** 1898807

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
485262002	SED-22
485262004	SED-21
485262005	SED-15
485262007	SED-18
485262009	SED-20
485262011	SED-23
485262012	SED-24
485262014	SED-19
485262016	SED-16
485262018	SED-14
485262020	SED-13
485262022	SED-11
485262026	SED-12
485262029	SED-25
485262030	SED-26
485262034	SED-17
485262036	DUP-01-071819
1204337176	Method Blank (MB)
1204337177	485262002(SED-22) Sample Duplicate (DUP)
1204337178	Laboratory Control Sample (LCS)

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

**Data Summary:**

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

**Technical Information**

**Recounts**

Samples 485262011 (SED-23) and 485262012 (SED-24) were recounted to verify sample results. The recount results are similar to the original results. Original results are reported.

**Product: Liquid Scint Tc99, Liquid**

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

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

**Analytical Batch:** 1899271

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

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
485262006	SW-18
485262008	SW-20
485262010	SW-23
485262013	SW-19
485262015	SW-16
485262017	SW-14
485262019	SW-13
485262021	SW-11
485262023	SW-22
485262024	SW-21
485262025	SW-12
485262027	EB-01-071819
485262028	EB-02-071819
485262033	SW-17
485262035	DUP-01-071819
1204338358	Method Blank (MB)
1204338359	485262010(SW-23) Sample Duplicate (DUP)
1204338360	Laboratory Control Sample (LCS)

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

**Data Summary:**

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

**Technical Information**

**Recounts**

Samples 1204338359 (SW-23DUP) and 485262010 (SW-23) were recounted due to high relative percent difference/relative error ratio. The recounts are reported.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

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

Client Name: Westing house  
 Subject/Site Name: WNUC00518  
 Address: 5801 Bluff Rd Hopkins SC 29061  
 Collected By: Benjamin Fife / Judith's Leaphart  
 Send Results To: Pina Joyner  
 Date Collected: 2019  
 Collected (Military): 1315  
 QC Code: G  
 Field Filtered: N  
 Sample Matrix: SW  
 Sample ID: \_\_\_\_\_  
 \* For composites - indicate start and stop date/time

Sample ID	Date	Time	Date	Time	Received by (signed)	Date	Time	Relinquished By (Signed)	Date	Time	Should this sample be considered:	Sample Analysis Requested (5) (Fill in the number of containers for each test)			Comments
												(7) Known or possible hazards	SA	WVNI	
SW-22	07-15-19	1315	G	N	SW	N	OT	X	X	X	X	X	X	X	Note: extra sample is required for sample specific QC
SED-22	07-15-19	1330	G	N	SD	N	OT	X	X	X	X	X	X	X	
SW-21	07-15-19	1600	G	N	SW	N	OT	X	X	X	X	X	X	X	Note: extra sample is required for sample specific QC
SED-21	07-15-19	1600	G	N	SD	N	OT	X	X	X	X	X	X	X	
SW-15	07-16-19	1120	G	N	SW	N	OT	X	X	X	X	X	X	X	Note: extra sample is required for sample specific QC
SED-18	07-16-19	1239	G	N	SD	N	OT	X	X	X	X	X	X	X	
SW-20	07-16-19	1400	G	N	SW	N	OT	X	X	X	X	X	X	X	Note: extra sample is required for sample specific QC
SED-20	07-16-19	1400	G	N	SD	N	OT	X	X	X	X	X	X	X	
SW-23	07-16-19	1545	G	N	SW	N	OT	X	X	X	X	X	X	X	Note: extra sample is required for sample specific QC
SED-23	07-16-19	1545	G	N	SD	N	OT	X	X	X	X	X	X	X	

Chain of Custody Signatures  
 Relinquished By (Signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by (signed) \_\_\_\_\_ Date 7/18/19 Time 16:27  
 1 A. Johnson  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks:  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: \_\_\_\_\_ °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other: \_\_\_\_\_  
 TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ (Subject to Surcharge)

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

Client Name: Westinghouse Phone # 803-647-1920  
 Project/Site Name: WVUCC00518 Fax # \_\_\_\_\_  
 Address: 5801 Bluff RD, Hopkins S.C. 29061  
 Collected By: Benjamin Fritzl Send Results To: Diana Joyner  
Judith Kephart  
 Sample ID \_\_\_\_\_  
 \* For composites - indicate start and stop date/time

Sample ID	Date Collected (mm-dd-yy)	Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Total number of containers		Sample Analysis Requested (5) (Fill in the number of containers for each test)		Preservative Type (6)	Comments					
						(7) Known or possible hazards	isotopic info	Radioactive	Fluoride	Metals	NI			NI	Fluoride	Metals	Technician	Technician
SED-23	07-16-19	1545	G	N	SD	N	OT	1	1	X	X	X	X	X	X	X	Technician: <u>Topop's</u>	
SED-24	07-16-19	1615	G	N	SD	N	OT	1	1	X	X	X	X	X	X	X	Technician: <u>Topop's</u>	
SW-19	07-17-19	0845	G	N	SW	N	OT	4	4	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	
SED-19	07-17-19	0845	G	N	SD	N	OT	1	1	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	
SW-16	07-17-19	1030	G	N	SW	N	OT	4	4	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	
SED-16	07-17-19	1030	G	N	SD	N	OT	1	1	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	
SW-14	07-17-19	1109	G	N	SW	N	OT	4	4	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	
SED-14	07-17-19	1100	G	N	SED	N	OT	1	1	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	
SW-13	07-17-19	1200	G	N	SW	N	OT	4	4	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	
SED-13	07-17-19	1200	G	N	SD	N	OT	1	1	X	X	X	X	X	X	X	Technician: <u>Fluoride</u>	

Relinquished By (Signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by (signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 1. Benjamin Fritzl 07-18-2019 16:27 D. Joyner 7/18/19 16:27  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ (Subject to Surchage)  
 Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks: \_\_\_\_\_  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: \_\_\_\_\_ °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other: \_\_\_\_\_

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

Project # 30595649.9 of A  
 GEL Quote #: \_\_\_\_\_  
 GEL Number (1): \_\_\_\_\_  
 GEL Work Order Number: \_\_\_\_\_  
 Client Name: Westinghouse  
 Project/Site Name: WNAEC00518  
 Address: 5801 Bluff Rd. Hopkins SC 29061  
 Phone # 803-647-1920  
 Fax # \_\_\_\_\_  
 GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

Collected By: Benjamin Fritzel / James Leaphant  
 Sample ID \_\_\_\_\_  
 Send Results To: Diana Joyner  
Wynner DPE White Hydroc. Com  
 \* For composites - indicate start and stop date/time

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

Chain of Custody Signatures  
 Relinquished By (Signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by (signed) \_\_\_\_\_ Date 7/18/19 Time 16:27  
 1. [Signature] 07-18-2019 16:27  
 2. \_\_\_\_\_  
 3. \_\_\_\_\_  
 TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ (Subject to Surcharge)  
 Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks: \_\_\_\_\_  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: \_\_\_\_\_ °C  
 Sample Collection Time Zone:  Eastern  Pacific  Mountain  Other: \_\_\_\_\_

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

Client Name: **Westinghouse** Phone: **803-647-1990**  
 Project # **60595649.9** Fax #  
 GEL Quote #: **WNU00518**  
 Address: **5801 Blatt Rd, Hopkins S.C. 29061**  
 Collected By: **Benjamin Taylor** Send Results To: **Diana Joyce**  
**James Taylor**  
 Sample ID  
 \* For composites - indicate start and stop date/time

Sample ID	Date Collected	QC Code	Field Filtered	Sample Matrix	Radiactive	Should this sample be considered:	Sample Analysis Requested (5) (Fill in the number of containers for each test)					Comments	
							SA	NI	NI	NI	NI		
SED-27	07-18-19	G	N	SD	Y	OT	1	Ammonia	Fluoride	Metals	Technetium 99	Isotopic Burnup	
SED-28	07-18-19	G	N	SD	Y	OT	1						
SW-17	07/18/19	G	N	SW	N	OT	4	X	X	X	X		
SED-17	07/18/19	G	N	SD	N	OT	1						
DUP-01-071819	07/18/19	—	N	SW	N	OT	4	X	X	X	X		
DUP-01-071819	07/18/19	—	N	SD	N	OT	1						

Relinquished By (Signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by (signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Signature: *Benjamin Taylor* 07-18-2019 16:27  
 Signature: *Diana Joyce* 7/18/19 16:27

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

**SAMPLE RECEIPT & REVIEW FORM**

Client: <b>WNMC</b>	SDG/AR/COC/Work Order: <b>485262</b>
Received By: <b>ZKW/RSO</b>	Date Received: <b>7/18/19</b>
Carrier and Tracking Number	Circle Applicable: FedEx Express    FedEx Ground    UPS    Field Services <b>(Courier)</b> Other  <b>GEL</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.
A) Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?	<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: <b>Rad 1</b> Rad 2    Rad 3
D) Did the client designate samples are hazardous?	<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?	<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below: PCB's    Flammable    Foreign Soil    RCRA    Asbestos    Beryllium    Other: _____

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable:    Seals broken    Damaged container    Leaking container    Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			Circle Applicable:    Client contacted and provided COC    COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>			Preservation Method: <b>Wet Ice</b> Ice Packs    Dry ice    None    Other: *all temperatures are recorded in Celsius                      TEMP: <u>1°C</u>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>			Temperature Device Serial #: <u>IR3-18</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable:    Seals broken    Damaged container    Leaking container    Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>			Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7	Do any samples require Volatile Analysis?				If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ <input checked="" type="checkbox"/> Sample ID's and containers affected:
8	Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles? <b>#8119</b>			<input checked="" type="checkbox"/>	ID's and containers affected: <b>SW19 container for Pchem not labeled.</b>
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Circle Applicable:    No dates on containers    No times on containers    COC missing info    Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Circle Applicable:    No container count on COC    Other (describe)
12	Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>			
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			Circle Applicable:    Not relinquished    Other (describe)

Comments (Use Continuation Form if needed):  
 Sed 27; 28 rec'd as fuel all others rec'd as Normal.



**List of current GEL Certifications as of 26 September 2019**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-013
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-28
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



December 09, 2019

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

Re: ENV-CONSENTA  
Work Order: 497413

Dear Ms. Logsdon:

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

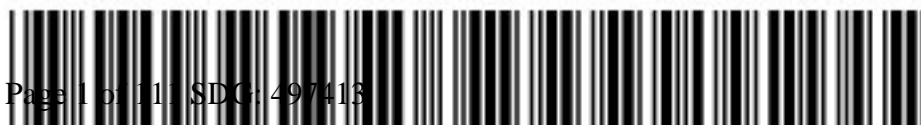
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without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

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

Sincerely,

Hope Taylor  
Project Manager

Purchase Order: 4500778461  
Enclosures



**GEL LABORATORIES LLC**

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

**Certificate of Analysis Report  
for**

WNUC009 Westinghouse Electric Co, LLC

Client SDG: 497413 GEL Work Order: 497413

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

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

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

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

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

Reviewed by top a d

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

Project: WNUC01519  
Client ID: WNUC009

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

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

The following Analytical Methods were performed:

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

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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

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

# GEL LABORATORIES LLC

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

## Certificate of Analysis

Report Date: December 9, 2019

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

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-30 0-6"  
Sample ID: 497413004

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
 Project: ENV-CONSENTA

Client Sample ID: SED-30 6-12"	Project: WNUC01519
Sample ID: 497413005	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 56%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		3.43	0.784	2.30	mg/kg	10.2	1	LXA2	11/23/19	2017	1942542	1
Nitrate-N	U	ND	0.761	2.30	mg/kg	10.2	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		21700000	15000	44100	ug/kg	97.1	1	TXT1	12/03/19	1916	1942808	2
Antimony	U	ND	727	4410	ug/kg	97.1	1					
Arsenic	J	2490	1100	6610	ug/kg	97.1	1					
Barium		140000	220	1100	ug/kg	97.1	1					
Beryllium		2320	220	1100	ug/kg	97.1	1					
Cadmium	U	ND	220	1100	ug/kg	97.1	1					
Calcium		448000	17600	55100	ug/kg	97.1	1					
Chromium		28300	331	2200	ug/kg	97.1	1					
Cobalt		4640	331	1100	ug/kg	97.1	1					
Copper		17000	661	4410	ug/kg	97.1	1					
Iron		10000000	17600	55100	ug/kg	97.1	1					
Lead		13400	727	4410	ug/kg	97.1	1					
Magnesium		1400000	18700	66100	ug/kg	97.1	1					
Manganese		122000	441	2200	ug/kg	97.1	1					
Nickel		9480	331	1100	ug/kg	97.1	1					
Potassium		509000	14100	55100	ug/kg	97.1	1					
Selenium	U	ND	1100	6610	ug/kg	97.1	1					
Sodium		110000	15400	55100	ug/kg	97.1	1					
Vanadium		51200	220	1100	ug/kg	97.1	1					
Zinc		31500	882	4410	ug/kg	97.1	1					
Thallium	U	ND	11000	44100	ug/kg	97.1	10	TXT1	12/03/19	1919	1942808	3
Silver	U	ND	2200	11000	ug/kg	97.1	10	TXT1	12/04/19	1141	1942808	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	21.0	4.21	29.5	ug/kg	92.8	2	PRB	12/08/19	1707	1942804	5
Uranium-238		2690	27.8	84.2	ug/kg	92.8	2					
Uranium-234	U	ND	4.21	21.1	ug/kg	92.8	2	PRB	12/09/19	1429	1942804	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		392	19.6	54.6	mg/kg	48.1	10	AXH3	11/26/19	0752	1942616	7

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-30 6-12"  
Sample ID: 497413005

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-31 0-6"	Project: WNUC01519
Sample ID: 497413006	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 12:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		3.13	0.489	1.44	mg/kg	9.41	1	LXA2	11/23/19	2046	1942542	1
Nitrate-N	U	ND	0.475	1.44	mg/kg	9.41	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		20400000	9650	28400	ug/kg	92.8	1	TXT1	12/03/19	1922	1942808	2
Arsenic		4510	709	4260	ug/kg	92.8	1					
Barium		213000	142	709	ug/kg	92.8	1					
Beryllium		1690	142	709	ug/kg	92.8	1					
Cadmium	U	ND	142	709	ug/kg	92.8	1					
Calcium		796000	11400	35500	ug/kg	92.8	1					
Chromium		26400	213	1420	ug/kg	92.8	1					
Cobalt		14300	213	709	ug/kg	92.8	1					
Copper		20500	426	2840	ug/kg	92.8	1					
Iron		28600000	11400	35500	ug/kg	92.8	1					
Lead		22900	468	2840	ug/kg	92.8	1					
Magnesium		3080000	12100	42600	ug/kg	92.8	1					
Manganese		788000	284	1420	ug/kg	92.8	1					
Nickel		12200	213	709	ug/kg	92.8	1					
Selenium	U	ND	709	4260	ug/kg	92.8	1					
Sodium		52700	9930	35500	ug/kg	92.8	1					
Vanadium		73400	142	709	ug/kg	92.8	1					
Zinc		56200	568	2840	ug/kg	92.8	1					
Antimony	U	ND	4680	28400	ug/kg	92.8	10	TXT1	12/03/19	1925	1942808	3
Potassium		1760000	90800	355000	ug/kg	92.8	10					
Thallium	U	ND	7090	28400	ug/kg	92.8	10					
Silver	U	ND	1420	7090	ug/kg	92.8	10	TXT1	12/04/19	1144	1942808	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		45.6	2.91	20.4	ug/kg	95.1	2	PRB	12/08/19	1709	1942804	5
Uranium-238		3400	19.2	58.2	ug/kg	95.1	2					
Uranium-234	U	ND	2.91	14.5	ug/kg	95.1	2	PRB	12/09/19	1431	1942804	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		286	13.5	37.5	mg/kg	49.0	10	AXH3	11/26/19	0753	1942616	7

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-31 0-6"  
Sample ID: 497413006

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-31 6-12"	Project: WNUC01519
Sample ID: 497413007	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 12:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 25%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		3.07	0.442	1.30	mg/kg	9.76	1	LXA2	11/23/19	2216	1942542	1
Nitrate-N	U	ND	0.429	1.30	mg/kg	9.76	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		15500000	8710	25600	ug/kg	96.2	1	TXT1	12/03/19	1934	1942808	2
Arsenic	J	2850	641	3840	ug/kg	96.2	1					
Barium		239000	128	641	ug/kg	96.2	1					
Beryllium		1670	128	641	ug/kg	96.2	1					
Cadmium	U	ND	128	641	ug/kg	96.2	1					
Calcium		679000	10300	32000	ug/kg	96.2	1					
Chromium		22800	192	1280	ug/kg	96.2	1					
Cobalt		16400	192	641	ug/kg	96.2	1					
Copper		17300	384	2560	ug/kg	96.2	1					
Iron		30000000	10300	32000	ug/kg	96.2	1					
Lead		14100	423	2560	ug/kg	96.2	1					
Magnesium		3110000	10900	38400	ug/kg	96.2	1					
Manganese		1090000	256	1280	ug/kg	96.2	1					
Nickel		10700	192	641	ug/kg	96.2	1					
Selenium	U	ND	641	3840	ug/kg	96.2	1					
Sodium		52600	8970	32000	ug/kg	96.2	1					
Vanadium		61900	128	641	ug/kg	96.2	1					
Zinc		45900	513	2560	ug/kg	96.2	1					
Antimony	U	ND	4230	25600	ug/kg	96.2	10	TXT1	12/03/19	1937	1942808	3
Potassium		1610000	82000	320000	ug/kg	96.2	10					
Thallium	U	ND	6410	25600	ug/kg	96.2	10					
Silver	U	ND	1280	6410	ug/kg	96.2	10	TXT1	12/04/19	1146	1942808	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		18.1	2.48	17.3	ug/kg	92.9	2	PRB	12/08/19	1711	1942804	5
Uranium-238		2220	16.4	49.5	ug/kg	92.9	2					
Uranium-234	U	ND	2.48	12.4	ug/kg	92.9	2	PRB	12/09/19	1433	1942804	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		118	10.0	27.8	mg/kg	41.7	10	AXH3	11/26/19	0753	1942616	7



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-31 6-12"  
Sample ID: 497413007

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-32 0-6"	Project: WNUC01519
Sample ID: 497413008	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 14:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 53%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		3.88	0.688	2.02	mg/kg	9.52	1	LXA2	11/23/19	2246	1942542	1
Nitrate-N	U	ND	0.668	2.02	mg/kg	9.52	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		15200000	14100	41500	ug/kg	97.7	1	TXT1	12/03/19	1940	1942808	2
Antimony	U	ND	685	4150	ug/kg	97.7	1					
Arsenic	J	2470	1040	6230	ug/kg	97.7	1					
Barium		168000	208	1040	ug/kg	97.7	1					
Beryllium		1350	208	1040	ug/kg	97.7	1					
Cadmium	U	ND	208	1040	ug/kg	97.7	1					
Calcium		1140000	16600	51900	ug/kg	97.7	1					
Chromium		22600	311	2080	ug/kg	97.7	1					
Cobalt		9950	311	1040	ug/kg	97.7	1					
Copper		19600	623	4150	ug/kg	97.7	1					
Iron		18600000	16600	51900	ug/kg	97.7	1					
Lead		24100	685	4150	ug/kg	97.7	1					
Magnesium		2440000	17600	62300	ug/kg	97.7	1					
Manganese		410000	415	2080	ug/kg	97.7	1					
Nickel		11200	311	1040	ug/kg	97.7	1					
Potassium		1090000	13300	51900	ug/kg	97.7	1					
Selenium	J	1170	1040	6230	ug/kg	97.7	1					
Sodium		68200	14500	51900	ug/kg	97.7	1					
Vanadium		53500	208	1040	ug/kg	97.7	1					
Zinc		62400	830	4150	ug/kg	97.7	1					
Thallium	U	ND	10400	41500	ug/kg	97.7	10	TXT1	12/03/19	1943	1942808	3
Silver	U	ND	2080	10400	ug/kg	97.7	10	TXT1	12/04/19	1149	1942808	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		72.9	3.98	27.9	ug/kg	93.6	2	PRB	12/08/19	1712	1942804	5
Uranium-238		4280	26.3	79.6	ug/kg	93.6	2					
Uranium-234	U	ND	3.98	19.9	ug/kg	93.6	2	PRB	12/09/19	1435	1942804	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		480	18.8	52.1	mg/kg	49.0	10	AXH3	11/26/19	0754	1942616	7

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-32 0-6"  
Sample ID: 497413008

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
 Project: ENV-CONSENTA

Client Sample ID: SED-32 6-12"	Project: WNUC01519
Sample ID: 497413009	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 14:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 46.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		4.21	0.638	1.88	mg/kg	10.1	1	LXA2	11/23/19	2315	1942542	1
Nitrate-N	U	ND	0.619	1.88	mg/kg	10.1	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		17600000	11700	34400	ug/kg	92.6	1	TXT1	12/03/19	1946	1942808	2
Antimony	U	ND	567	3440	ug/kg	92.6	1					
Arsenic	J	3350	860	5160	ug/kg	92.6	1					
Barium		203000	172	860	ug/kg	92.6	1					
Beryllium		1530	172	860	ug/kg	92.6	1					
Cadmium	U	ND	172	860	ug/kg	92.6	1					
Calcium		742000	13800	43000	ug/kg	92.6	1					
Chromium		25900	258	1720	ug/kg	92.6	1					
Cobalt		10000	258	860	ug/kg	92.6	1					
Copper		22300	516	3440	ug/kg	92.6	1					
Iron		21300000	13800	43000	ug/kg	92.6	1					
Lead		40000	567	3440	ug/kg	92.6	1					
Magnesium		2570000	14600	51600	ug/kg	92.6	1					
Manganese		323000	344	1720	ug/kg	92.6	1					
Nickel		13900	258	860	ug/kg	92.6	1					
Potassium		1090000	11000	43000	ug/kg	92.6	1					
Selenium	J	904	860	5160	ug/kg	92.6	1					
Sodium		89100	12000	43000	ug/kg	92.6	1					
Vanadium		64300	172	860	ug/kg	92.6	1					
Zinc		60700	688	3440	ug/kg	92.6	1					
Thallium	U	ND	8600	34400	ug/kg	92.6	10	TXT1	12/03/19	1949	1942808	3
Silver	U	ND	1720	8600	ug/kg	92.6	10	TXT1	12/04/19	1152	1942808	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		195	3.67	25.7	ug/kg	98.8	2	PRB	12/08/19	1714	1942804	5
Uranium-238		8370	24.2	73.4	ug/kg	98.8	2					
Uranium-234	U	ND	3.67	18.4	ug/kg	98.8	2	PRB	12/09/19	1437	1942804	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		576	15.5	43.0	mg/kg	46.3	10	AXH3	11/26/19	0755	1942616	7

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-32 6-12"  
Sample ID: 497413009

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 0-6"	Project: WNUC01519
Sample ID: 497413010	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 44.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride	J	1.57	0.593	1.74	mg/kg	9.62	1	LXA2	11/23/19	2345	1942542	1
Nitrate-N	U	ND	0.575	1.74	mg/kg	9.62	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		23200000	12100	35600	ug/kg	98.2	1	TXT1	12/03/19	1952	1942808	2
Arsenic		5430	890	5340	ug/kg	98.2	1					
Barium		167000	178	890	ug/kg	98.2	1					
Beryllium		1830	178	890	ug/kg	98.2	1					
Cadmium	U	ND	178	890	ug/kg	98.2	1					
Calcium		292000	14200	44500	ug/kg	98.2	1					
Chromium		28300	267	1780	ug/kg	98.2	1					
Cobalt		11400	267	890	ug/kg	98.2	1					
Copper		21900	534	3560	ug/kg	98.2	1					
Iron		29300000	14200	44500	ug/kg	98.2	1					
Lead		20100	588	3560	ug/kg	98.2	1					
Magnesium		3060000	15100	53400	ug/kg	98.2	1					
Manganese		295000	356	1780	ug/kg	98.2	1					
Nickel		12900	267	890	ug/kg	98.2	1					
Potassium		1460000	11400	44500	ug/kg	98.2	1					
Selenium	U	ND	890	5340	ug/kg	98.2	1					
Sodium		85700	12500	44500	ug/kg	98.2	1					
Vanadium		81100	178	890	ug/kg	98.2	1					
Zinc		56800	712	3560	ug/kg	98.2	1					
Antimony	U	ND	5880	35600	ug/kg	98.2	10	TXT1	12/03/19	1955	1942808	3
Thallium	U	ND	8900	35600	ug/kg	98.2	10					
Silver	U	ND	1780	8900	ug/kg	98.2	10	TXT1	12/04/19	1155	1942808	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-238		14200	21.8	65.9	ug/kg	90.9	2	PRB	12/08/19	1716	1942804	5
Uranium-234	U	ND	3.30	16.5	ug/kg	90.9	2	PRB	12/09/19	1439	1942804	6
Uranium-235		305	16.5	115	ug/kg	90.9	10	PRB	12/09/19	1040	1942804	7
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		248	16.3	45.3	mg/kg	50.0	10	AXH3	11/26/19	0756	1942616	8

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 0-6"  
Sample ID: 497413010

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942803
SW846 3050B	SW846 3050B Prep	SM1	11/26/19	1000	1942807
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	SW846 3050B/6020B	
8	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 6-12"	Project: WNUC01519
Sample ID: 497413011	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 36.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		1.56	0.524	1.54	mg/kg	9.80	1	LXA2	11/24/19	0015	1942542	1
Nitrate-N	U	ND	0.509	1.54	mg/kg	9.80	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		18200000	10300	30300	ug/kg	96.2	1	TXT1	12/05/19	1654	1942810	2
Arsenic	J	3270	756	4540	ug/kg	96.2	1					
Barium		163000	151	756	ug/kg	96.2	1					
Beryllium		2070	151	756	ug/kg	96.2	1					
Cadmium	U	ND	151	756	ug/kg	96.2	1					
Calcium		182000	12100	37800	ug/kg	96.2	1					
Chromium		25600	227	1510	ug/kg	96.2	1					
Cobalt		13800	227	756	ug/kg	96.2	1					
Copper		19300	454	3030	ug/kg	96.2	1					
Iron		29100000	12100	37800	ug/kg	96.2	1					
Lead		11700	499	3030	ug/kg	96.2	1					
Magnesium		3590000	12900	45400	ug/kg	96.2	1					
Manganese		281000	303	1510	ug/kg	96.2	1					
Nickel		12100	227	756	ug/kg	96.2	1					
Potassium		1700000	9680	37800	ug/kg	96.2	1					
Selenium	U	ND	756	4540	ug/kg	96.2	1					
Sodium		59700	10600	37800	ug/kg	96.2	1					
Vanadium		74400	151	756	ug/kg	96.2	1					
Zinc		52600	605	3030	ug/kg	96.2	1					
Antimony	U	ND	4990	30300	ug/kg	96.2	10	TXT1	12/05/19	1706	1942810	3
Silver	U	ND	1510	7560	ug/kg	96.2	10					
Thallium	U	ND	7560	30300	ug/kg	96.2	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		21.8	2.94	20.5	ug/kg	93.3	2	PRB	12/08/19	1724	1942806	4
Uranium-238		2750	19.4	58.7	ug/kg	93.3	2					
Uranium-234	U	ND	2.94	14.7	ug/kg	93.3	2	PRB	12/08/19	2348	1942806	5
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		117	1.14	3.17	mg/kg	40.3	1	AXH3	11/26/19	0731	1942616	6



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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 6-12"  
Sample ID: 497413011

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 12-16"	Project: WNUC01519
Sample ID: 497413012	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:10	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 28.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		6.63	0.497	1.46	mg/kg	10.4	1	LXA2	11/24/19	0144	1942542	1
Nitrate-N	J	1.17	0.482	1.46	mg/kg	10.4	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		15500000	9270	27300	ug/kg	96.9	1	TXT1	12/05/19	1728	1942810	2
Antimony	U	ND	450	2730	ug/kg	96.9	1					
Arsenic	J	3140	682	4090	ug/kg	96.9	1					
Barium		135000	136	682	ug/kg	96.9	1					
Beryllium		1630	136	682	ug/kg	96.9	1					
Cadmium	U	ND	136	682	ug/kg	96.9	1					
Calcium		150000	10900	34100	ug/kg	96.9	1					
Chromium		23400	204	1360	ug/kg	96.9	1					
Cobalt		6840	204	682	ug/kg	96.9	1					
Copper		12900	409	2730	ug/kg	96.9	1					
Iron		16700000	10900	34100	ug/kg	96.9	1					
Lead		11800	450	2730	ug/kg	96.9	1					
Magnesium		1370000	11600	40900	ug/kg	96.9	1					
Manganese		176000	273	1360	ug/kg	96.9	1					
Nickel		7210	204	682	ug/kg	96.9	1					
Potassium		443000	8720	34100	ug/kg	96.9	1					
Selenium	U	ND	682	4090	ug/kg	96.9	1					
Sodium		48800	9540	34100	ug/kg	96.9	1					
Vanadium		56400	136	682	ug/kg	96.9	1					
Zinc		27600	545	2730	ug/kg	96.9	1					
Silver	U	ND	1360	6820	ug/kg	96.9	10	TXT1	12/05/19	1731	1942810	3
Thallium	U	ND	6820	27300	ug/kg	96.9	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	16.5	2.81	19.7	ug/kg	100	2	PRB	12/08/19	1736	1942806	4
Uranium-238		2230	18.6	56.3	ug/kg	100	2					
Uranium-234	U	ND	2.81	14.1	ug/kg	100	2	PRB	12/09/19	0000	1942806	5
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		67.3	1.09	3.03	mg/kg	43.1	1	AXH3	11/26/19	0738	1942616	6

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 12-16"  
Sample ID: 497413012

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-34 0-6"	Project: WNUC01519
Sample ID: 497413013	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 16:10	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 47%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		2.20	0.658	1.93	mg/kg	10.3	1	LXA2	11/24/19	0214	1942542	1
Nitrate-N	U	ND	0.638	1.93	mg/kg	10.3	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		23600000	12200	35900	ug/kg	95.2	1	TXT1	12/05/19	1733	1942810	2
Antimony	U	ND	593	3590	ug/kg	95.2	1					
Arsenic	J	4410	898	5390	ug/kg	95.2	1					
Barium		174000	180	898	ug/kg	95.2	1					
Beryllium		1960	180	898	ug/kg	95.2	1					
Cadmium	U	ND	180	898	ug/kg	95.2	1					
Calcium		843000	14400	44900	ug/kg	95.2	1					
Chromium		28700	269	1800	ug/kg	95.2	1					
Cobalt		15900	269	898	ug/kg	95.2	1					
Copper		26300	539	3590	ug/kg	95.2	1					
Iron		32800000	14400	44900	ug/kg	95.2	1					
Lead		31300	593	3590	ug/kg	95.2	1					
Magnesium		3110000	15300	53900	ug/kg	95.2	1					
Manganese		906000	359	1800	ug/kg	95.2	1					
Nickel		13200	269	898	ug/kg	95.2	1					
Potassium		1320000	11500	44900	ug/kg	95.2	1					
Selenium	J	1050	898	5390	ug/kg	95.2	1					
Sodium		64900	12600	44900	ug/kg	95.2	1					
Vanadium		86100	180	898	ug/kg	95.2	1					
Zinc		56500	718	3590	ug/kg	95.2	1					
Silver	U	ND	1800	8980	ug/kg	95.2	10	TXT1	12/05/19	1736	1942810	3
Thallium	U	ND	8980	35900	ug/kg	95.2	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		44.9	3.52	24.6	ug/kg	93.3	2	PRB	12/08/19	1738	1942806	4
Uranium-238		3650	23.2	70.4	ug/kg	93.3	2					
Uranium-234	U	ND	3.52	17.6	ug/kg	93.3	2	PRB	12/09/19	0002	1942806	5
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		397	9.43	26.2	mg/kg	27.8	10	AXH3	11/26/19	0757	1942616	6

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205  
Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-34 0-6" Project: WNUC01519  
Sample ID: 497413013 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-34 6-12"	Project: WNUC01519
Sample ID: 497413014	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 16:15	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 40.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		4.26	0.585	1.72	mg/kg	10.2	1	LXA2	11/24/19	0244	1942542	1
Nitrate-N	U	ND	0.568	1.72	mg/kg	10.2	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		24200000	11100	32800	ug/kg	97.5	1	TXT1	12/05/19	1739	1942810	2
Arsenic	J	4440	820	4920	ug/kg	97.5	1					
Barium		170000	164	820	ug/kg	97.5	1					
Beryllium		2700	164	820	ug/kg	97.5	1					
Cadmium	U	ND	164	820	ug/kg	97.5	1					
Calcium		762000	13100	41000	ug/kg	97.5	1					
Chromium		32700	246	1640	ug/kg	97.5	1					
Cobalt		17500	246	820	ug/kg	97.5	1					
Copper		24800	492	3280	ug/kg	97.5	1					
Iron		32200000	13100	41000	ug/kg	97.5	1					
Lead		22300	541	3280	ug/kg	97.5	1					
Magnesium		4000000	13900	49200	ug/kg	97.5	1					
Manganese		1020000	328	1640	ug/kg	97.5	1					
Nickel		14200	246	820	ug/kg	97.5	1					
Potassium		1290000	10500	41000	ug/kg	97.5	1					
Selenium	J	1230	820	4920	ug/kg	97.5	1					
Sodium		62500	11500	41000	ug/kg	97.5	1					
Vanadium		89100	164	820	ug/kg	97.5	1					
Zinc		60900	656	3280	ug/kg	97.5	1					
Antimony	U	ND	5410	32800	ug/kg	97.5	10	TXT1	12/05/19	1742	1942810	3
Silver	U	ND	1640	8200	ug/kg	97.5	10					
Thallium	U	ND	8200	32800	ug/kg	97.5	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		36.3	3.27	22.9	ug/kg	97.1	2	PRB	12/08/19	1740	1942806	4
Uranium-238		3770	21.6	65.3	ug/kg	97.1	2					
Uranium-234	U	ND	3.27	16.3	ug/kg	97.1	2	PRB	12/09/19	0004	1942806	5
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		336	12.4	34.5	mg/kg	41.0	10	AXH3	11/26/19	0758	1942616	6

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-34 6-12"  
Sample ID: 497413014

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 3050B/6010D	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-35 0-6"	Project: WNUC01519
Sample ID: 497413015	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 08:40	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Nitrate-N	J	1.05	0.492	1.49	mg/kg	9.71	1	LXA2	11/24/19	0413	1942542	1
Fluoride		2.09	0.507	1.49	mg/kg	9.71	1	LXA2	11/26/19	1820	1942542	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		24800000	10200	29900	ug/kg	97.3	1	TXT1	12/05/19	1745	1942810	3
Arsenic	J	3070	747	4480	ug/kg	97.3	1					
Barium		203000	149	747	ug/kg	97.3	1					
Beryllium		2050	149	747	ug/kg	97.3	1					
Cadmium	U	ND	149	747	ug/kg	97.3	1					
Calcium		490000	11900	37300	ug/kg	97.3	1					
Chromium		33500	224	1490	ug/kg	97.3	1					
Cobalt		17400	224	747	ug/kg	97.3	1					
Copper		23200	448	2990	ug/kg	97.3	1					
Iron		30300000	11900	37300	ug/kg	97.3	1					
Lead		12200	493	2990	ug/kg	97.3	1					
Magnesium		4450000	12700	44800	ug/kg	97.3	1					
Manganese		461000	299	1490	ug/kg	97.3	1					
Nickel		14700	224	747	ug/kg	97.3	1					
Potassium		2130000	9560	37300	ug/kg	97.3	1					
Selenium	U	ND	747	4480	ug/kg	97.3	1					
Sodium		59200	10500	37300	ug/kg	97.3	1					
Vanadium		74100	149	747	ug/kg	97.3	1					
Zinc		53100	597	2990	ug/kg	97.3	1					
Antimony	U	ND	4930	29900	ug/kg	97.3	10	TXT1	12/05/19	1748	1942810	4
Silver	U	ND	1490	7470	ug/kg	97.3	10					
Thallium	U	ND	7470	29900	ug/kg	97.3	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		36.8	2.81	19.6	ug/kg	91.4	2	PRB	12/08/19	1741	1942806	5
Uranium-238		3920	18.5	56.1	ug/kg	91.4	2					
Uranium-234	U	ND	2.81	14.0	ug/kg	91.4	2	PRB	12/09/19	0006	1942806	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		158	10.8	30.0	mg/kg	39.1	10	AXH3	11/26/19	0759	1942616	7



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Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-35 0-6"  
Sample ID: 497413015

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 9056A		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-35 6-12"	Project:	WNUC01519
Sample ID:	497413016	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	22-NOV-19 08:45		
Receive Date:	22-NOV-19		
Collector:	Client		
Moisture:	29.2%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Nitrate-N	J	1.03	0.420	1.27	mg/kg	9.01	1	LXA2	11/24/19	0443	1942542	1
Fluoride		4.29	0.433	1.27	mg/kg	9.01	1	LXA2	11/26/19	1850	1942542	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		22100000	9530	28000	ug/kg	99.2	1	TXT1	12/05/19	1751	1942810	3
Arsenic	J	3650	701	4200	ug/kg	99.2	1					
Barium		178000	140	701	ug/kg	99.2	1					
Beryllium		2380	140	701	ug/kg	99.2	1					
Cadmium	U	ND	140	701	ug/kg	99.2	1					
Calcium		542000	11200	35000	ug/kg	99.2	1					
Chromium		27300	210	1400	ug/kg	99.2	1					
Cobalt		19100	210	701	ug/kg	99.2	1					
Copper		24300	420	2800	ug/kg	99.2	1					
Iron		35600000	11200	35000	ug/kg	99.2	1					
Lead		13600	462	2800	ug/kg	99.2	1					
Magnesium		4410000	11900	42000	ug/kg	99.2	1					
Manganese		819000	280	1400	ug/kg	99.2	1					
Nickel		13700	210	701	ug/kg	99.2	1					
Potassium		2050000	8970	35000	ug/kg	99.2	1					
Selenium	U	ND	701	4200	ug/kg	99.2	1					
Sodium		58900	9810	35000	ug/kg	99.2	1					
Vanadium		82100	140	701	ug/kg	99.2	1					
Zinc		51300	560	2800	ug/kg	99.2	1					
Antimony	U	ND	4620	28000	ug/kg	99.2	10	TXT1	12/05/19	1754	1942810	4
Silver	U	ND	1400	7010	ug/kg	99.2	10					
Thallium	U	ND	7010	28000	ug/kg	99.2	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		28.9	2.65	18.5	ug/kg	93.8	2	PRB	12/08/19	1743	1942806	5
Uranium-238		3630	17.5	53.0	ug/kg	93.8	2					
Uranium-234	U	ND	2.65	13.2	ug/kg	93.8	2	PRB	12/09/19	0008	1942806	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		80.1	1.22	3.39	mg/kg	48.1	1	AXH3	11/26/19	0742	1942616	7

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Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-35 6-12"  
Sample ID: 497413016

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 9056A		
3	SW846 3050B/6010D		
4	SW846 3050B/6010D		
5	SW846 3050B/6020B		
6	SW846 3050B/6020B		
7	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-36 0-6"	Project: WNUC01519
Sample ID: 497413017	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 33.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride	U	ND	0.489	1.44	mg/kg	9.62	1	LXA2	11/24/19	0513	1942542	1
Nitrate-N	U	ND	0.474	1.44	mg/kg	9.62	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		15300000	9830	28900	ug/kg	96.7	1	TXT1	12/05/19	1804	1942810	2
Antimony	U	ND	477	2890	ug/kg	96.7	1					
Arsenic	J	2900	723	4340	ug/kg	96.7	1					
Barium		106000	145	723	ug/kg	96.7	1					
Beryllium		1080	145	723	ug/kg	96.7	1					
Cadmium	U	ND	145	723	ug/kg	96.7	1					
Calcium		256000	11600	36100	ug/kg	96.7	1					
Chromium		19300	217	1450	ug/kg	96.7	1					
Cobalt		9080	217	723	ug/kg	96.7	1					
Copper		14900	434	2890	ug/kg	96.7	1					
Iron		22000000	11600	36100	ug/kg	96.7	1					
Lead		17500	477	2890	ug/kg	96.7	1					
Magnesium		2320000	12300	43400	ug/kg	96.7	1					
Manganese		260000	289	1450	ug/kg	96.7	1					
Nickel		8870	217	723	ug/kg	96.7	1					
Potassium		1200000	9250	36100	ug/kg	96.7	1					
Selenium	U	ND	723	4340	ug/kg	96.7	1					
Sodium		50900	10100	36100	ug/kg	96.7	1					
Vanadium		50300	145	723	ug/kg	96.7	1					
Zinc		39000	578	2890	ug/kg	96.7	1					
Silver	U	ND	1450	7230	ug/kg	96.7	10	TXT1	12/05/19	1807	1942810	3
Thallium	U	ND	7230	28900	ug/kg	96.7	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		70.2	2.85	19.9	ug/kg	95.2	2	PRB	12/08/19	1745	1942806	4
Uranium-238		3970	18.8	57.0	ug/kg	95.2	2					
Uranium-234	U	ND	2.85	14.2	ug/kg	95.2	2	PRB	12/09/19	0010	1942806	5
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		153	8.85	24.6	mg/kg	32.9	10	AXH3	11/26/19	0803	1942616	6

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-36 0-6"  
Sample ID: 497413017

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
 Project: ENV-CONSENTA

Client Sample ID: SED-36 6-12"	Project: WNUC01519
Sample ID: 497413018	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 31%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride	U	ND	0.450	1.32	mg/kg	9.13	1	LXA2	11/24/19	0543	1942542	1
Nitrate-N	U	ND	0.437	1.32	mg/kg	9.13	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		16100000	9150	26900	ug/kg	92.8	1	TXT1	12/05/19	1810	1942810	2
Arsenic	J	3850	673	4040	ug/kg	92.8	1					
Barium		123000	135	673	ug/kg	92.8	1					
Beryllium		1430	135	673	ug/kg	92.8	1					
Cadmium	U	ND	135	673	ug/kg	92.8	1					
Calcium		158000	10800	33600	ug/kg	92.8	1					
Chromium		19700	202	1350	ug/kg	92.8	1					
Cobalt		11700	202	673	ug/kg	92.8	1					
Copper		17100	404	2690	ug/kg	92.8	1					
Iron		30400000	10800	33600	ug/kg	92.8	1					
Lead		20500	444	2690	ug/kg	92.8	1					
Magnesium		2840000	11400	40400	ug/kg	92.8	1					
Manganese		322000	269	1350	ug/kg	92.8	1					
Nickel		9480	202	673	ug/kg	92.8	1					
Potassium		1400000	8610	33600	ug/kg	92.8	1					
Selenium	U	ND	673	4040	ug/kg	92.8	1					
Sodium		57900	9420	33600	ug/kg	92.8	1					
Vanadium		60200	135	673	ug/kg	92.8	1					
Zinc		40700	538	2690	ug/kg	92.8	1					
Antimony	U	ND	4440	26900	ug/kg	92.8	10	TXT1	12/05/19	1813	1942810	3
Silver	U	ND	1350	6730	ug/kg	92.8	10					
Thallium	U	ND	6730	26900	ug/kg	92.8	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		19.1	2.71	18.9	ug/kg	93.3	2	PRB	12/08/19	1746	1942806	4
Uranium-238		1990	17.9	54.1	ug/kg	93.3	2					
Uranium-234	U	ND	2.71	13.5	ug/kg	93.3	2	PRB	12/09/19	0012	1942806	5
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		99.1	1.33	3.70	mg/kg	51.0	1	AXH3	11/26/19	0744	1942616	6

# GEL LABORATORIES LLC

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## Certificate of Analysis

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-36 6-12"  
Sample ID: 497413018

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 0-6"	Project: WNUC01519
Sample ID: 497413019	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:20	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 41.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Nitrate-N	U	ND	0.519	1.57	mg/kg	9.22	1	LXA2	11/24/19	0613	1942542	1
Fluoride	J	1.35	0.534	1.57	mg/kg	9.22	1	LXA2	11/26/19	1919	1942542	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		14800000	11100	32700	ug/kg	95.8	1	TXT1	12/05/19	1816	1942810	3
Antimony	U	ND	539	3270	ug/kg	95.8	1					
Arsenic	J	3340	817	4900	ug/kg	95.8	1					
Barium		122000	163	817	ug/kg	95.8	1					
Beryllium		1060	163	817	ug/kg	95.8	1					
Cadmium	U	ND	163	817	ug/kg	95.8	1					
Calcium		394000	13100	40800	ug/kg	95.8	1					
Chromium		18500	245	1630	ug/kg	95.8	1					
Cobalt		6860	245	817	ug/kg	95.8	1					
Copper		14700	490	3270	ug/kg	95.8	1					
Iron		20500000	13100	40800	ug/kg	95.8	1					
Lead		30100	539	3270	ug/kg	95.8	1					
Magnesium		2010000	13900	49000	ug/kg	95.8	1					
Manganese		215000	327	1630	ug/kg	95.8	1					
Nickel		8540	245	817	ug/kg	95.8	1					
Potassium		1050000	10500	40800	ug/kg	95.8	1					
Selenium	J	899	817	4900	ug/kg	95.8	1					
Sodium		47000	11400	40800	ug/kg	95.8	1					
Vanadium		48500	163	817	ug/kg	95.8	1					
Zinc		37200	653	3270	ug/kg	95.8	1					
Silver	U	ND	1630	8170	ug/kg	95.8	10	TXT1	12/05/19	1819	1942810	4
Thallium	U	ND	8170	32700	ug/kg	95.8	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		102	3.19	22.3	ug/kg	93.5	2	PRB	12/08/19	1748	1942806	5
Uranium-238		4850	21.0	63.8	ug/kg	93.5	2					
Uranium-234	U	ND	3.19	15.9	ug/kg	93.5	2	PRB	12/09/19	0014	1942806	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		451	13.2	36.8	mg/kg	43.1	10	AXH3	11/26/19	0804	1942616	7



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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 0-6"  
Sample ID: 497413019

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 9056A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12"	Project: WNUC01519
Sample ID: 497413020	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:25	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Fluoride		1.60	0.509	1.50	mg/kg	9.80	1	CH5	11/30/19	0112	1944127	1
Nitrate-N	U	ND	0.494	1.50	mg/kg	9.80	1					
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		18700000	9610	28300	ug/kg	92.4	1	TXT1	12/05/19	1822	1942810	2
Arsenic	J	3700	706	4240	ug/kg	92.4	1					
Barium		134000	141	706	ug/kg	92.4	1					
Beryllium		1380	141	706	ug/kg	92.4	1					
Cadmium	U	ND	141	706	ug/kg	92.4	1					
Calcium		346000	11300	35300	ug/kg	92.4	1					
Chromium		22600	212	1410	ug/kg	92.4	1					
Cobalt		8530	212	706	ug/kg	92.4	1					
Copper		18200	424	2830	ug/kg	92.4	1					
Iron		25700000	11300	35300	ug/kg	92.4	1					
Lead		20700	466	2830	ug/kg	92.4	1					
Magnesium		2560000	12000	42400	ug/kg	92.4	1					
Manganese		219000	283	1410	ug/kg	92.4	1					
Nickel		10000	212	706	ug/kg	92.4	1					
Potassium		1130000	9040	35300	ug/kg	92.4	1					
Selenium	U	ND	706	4240	ug/kg	92.4	1					
Sodium		51000	9890	35300	ug/kg	92.4	1					
Vanadium		67200	141	706	ug/kg	92.4	1					
Zinc		41100	565	2830	ug/kg	92.4	1					
Antimony	U	ND	4660	28300	ug/kg	92.4	10	TXT1	12/05/19	1825	1942810	3
Silver	U	ND	1410	7060	ug/kg	92.4	10					
Thallium	U	ND	7060	28300	ug/kg	92.4	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		67.4	2.91	20.3	ug/kg	95.1	2	PRB	12/08/19	1750	1942806	4
Uranium-238		3930	19.2	58.1	ug/kg	95.1	2					
Uranium-234	U	ND	2.91	14.5	ug/kg	95.1	2	PRB	12/09/19	0016	1942806	5
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		127	1.23	3.41	mg/kg	44.6	1	AXH3	11/26/19	0751	1942616	6

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12"  
Sample ID: 497413020

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0956	1942615
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	SW846 3050B/6010D		
3	SW846 3050B/6010D		
4	SW846 3050B/6020B		
5	SW846 3050B/6020B		
6	EPA 350.1 Modified		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12" DUP	Project: WNUC01519
Sample ID: 497413021	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:25	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride and Nitrate "Dry Weight Corrected"</b>												
Nitrate-N	U	ND	0.517	1.57	mg/kg	10.3	1	LXA2	11/24/19	0712	1942542	1
Fluoride	J	0.858	0.533	1.57	mg/kg	10.3	1	LXA2	11/26/19	1949	1942542	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		19000000	10200	30000	ug/kg	98.6	1	TXT1	12/05/19	1827	1942810	3
Arsenic	J	3880	749	4500	ug/kg	98.6	1					
Barium		142000	150	749	ug/kg	98.6	1					
Beryllium		1500	150	749	ug/kg	98.6	1					
Cadmium	U	ND	150	749	ug/kg	98.6	1					
Calcium		335000	12000	37500	ug/kg	98.6	1					
Chromium		23000	225	1500	ug/kg	98.6	1					
Cobalt		8880	225	749	ug/kg	98.6	1					
Copper		19400	450	3000	ug/kg	98.6	1					
Iron		26800000	12000	37500	ug/kg	98.6	1					
Lead		22000	495	3000	ug/kg	98.6	1					
Magnesium		2640000	12700	45000	ug/kg	98.6	1					
Manganese		230000	300	1500	ug/kg	98.6	1					
Nickel		10200	225	749	ug/kg	98.6	1					
Potassium		1160000	9590	37500	ug/kg	98.6	1					
Selenium	U	ND	749	4500	ug/kg	98.6	1					
Sodium		60200	10500	37500	ug/kg	98.6	1					
Vanadium		67900	150	749	ug/kg	98.6	1					
Zinc		42000	599	3000	ug/kg	98.6	1					
Antimony	U	ND	4950	30000	ug/kg	98.6	10	TXT1	12/05/19	1830	1942810	4
Silver	U	ND	1500	7490	ug/kg	98.6	10					
Thallium	U	ND	7490	30000	ug/kg	98.6	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		31.7	3.00	21.0	ug/kg	98.8	2	PRB	12/08/19	1752	1942806	5
Uranium-238		2910	19.8	60.1	ug/kg	98.8	2					
Uranium-234	U	ND	3.00	15.0	ug/kg	98.8	2	PRB	12/09/19	0018	1942806	6
<b>Nutrient Analysis</b>												
<b>EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"</b>												
Nitrogen, Ammonia		178	6.00	16.7	mg/kg	43.9	5	AXH3	11/26/19	0606	1942607	7

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12" DUP  
Sample ID: 497413021

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	11/25/19	0955	1942606
SW846 3050B	ICP-MS 3050BS PREP	SM1	11/27/19	1030	1942805
SW846 3050B	SW846 3050B Prep	SM1	12/05/19	1329	1942809
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/23/19	1458	1942541

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 9056A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-29 0-6	Project: WNUC01519
Sample ID: 497413001	Client ID: WNUC009
Matrix: Soil	
Collect Date: 20-NOV-19 14:35	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 59.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		6.23	+/-0.633	0.127	0.500	pCi/g		MP2		11/29/19	0814	1942981	1
Uranium-235/236		0.313	+/-0.167	0.125	0.500	pCi/g							
Uranium-238		2.51	+/-0.402	0.0918	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-14.5	+/-19.3	34.3	50.0	pCi/g		JJ3		12/01/19	1716	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			88.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-29 6-12"	Project: WNUC01519
Sample ID: 497413002	Client ID: WNUC009
Matrix: Soil	
Collect Date: 20-NOV-19 14:40	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 46.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.81	+/-0.379	0.168	0.500	pCi/g			MP2	11/29/19	0814	1942981	1
Uranium-235/236		0.208	+/-0.153	0.135	0.500	pCi/g							
Uranium-238		1.55	+/-0.350	0.160	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-5.08	+/-14.2	25.0	50.0	pCi/g			JJ3	12/01/19	1738	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			73.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-29 12-16"	Project: WNUC01519
Sample ID: 497413003	Client ID: WNUC009
Matrix: Soil	
Collect Date: 20-NOV-19 14:45	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 37.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.23	+/-0.311	0.190	0.500	pCi/g			MP2	11/29/19	0814	1942981	1
Uranium-235/236		0.175	+/-0.139	0.129	0.500	pCi/g							
Uranium-238		1.16	+/-0.297	0.140	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-7.35	+/-24.7	43.2	50.0	pCi/g			JJ3	12/01/19	1800	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			77	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-30 0-6"	Project: WNUC01519
Sample ID: 497413004	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 09:55	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 52.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		5.71	+/-0.616	0.124	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236		0.191	+/-0.132	0.0636	0.500	pCi/g							
Uranium-238		2.51	+/-0.409	0.095	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	2.43	+/-20.2	34.9	50.0	pCi/g			JJ3	12/01/19	1822	1943186	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			66.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-30 6-12"	Project: WNUC01519
Sample ID: 497413005	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 56%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.41	+/-0.347	0.166	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236	U	0.0337	+/-0.0926	0.161	0.500	pCi/g							
Uranium-238		1.28	+/-0.329	0.130	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-12.9	+/-23.4	41.3	50.0	pCi/g			JJ3	12/01/19	1844	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			58.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-31 0-6"	Project: WNUC01519
Sample ID: 497413006	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 12:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.81	+/-0.466	0.194	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.0669	+/-0.108	0.168	0.500	pCi/g							
Uranium-238		1.75	+/-0.364	0.118	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.959	+/-17.7	30.6	50.0	pCi/g			JJ3	12/01/19	1906	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-31 6-12"	Project: WNUC01519
Sample ID: 497413007	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 12:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 25%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.96	+/-0.453	0.140	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.110	+/-0.116	0.144	0.500	pCi/g							
Uranium-238		1.69	+/-0.343	0.108	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-5.17	+/-11.1	19.6	50.0	pCi/g			JJ3	12/01/19	1927	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			81.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.1	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-32 0-6"	Project: WNUC01519
Sample ID: 497413008	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 14:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 53%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		3.71	+/-0.531	0.153	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.097	+/-0.118	0.158	0.500	pCi/g							
Uranium-238		2.00	+/-0.391	0.136	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	5.06	+/-16.4	28.1	50.0	pCi/g			JJ3	12/01/19	1949	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			77.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-32 6-12"	Project:	WNUC01519
Sample ID:	497413009	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	21-NOV-19 14:05		
Receive Date:	22-NOV-19		
Collector:	Client		
Moisture:	46.2%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		10.0	+/-0.819	0.142	0.500	pCi/g		MP2		11/29/19	0815	1942981	1
Uranium-235/236		0.469	+/-0.201	0.064	0.500	pCi/g							
Uranium-238		3.28	+/-0.469	0.114	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-1.95	+/-14.2	24.8	50.0	pCi/g		JJ3		12/01/19	2011	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			82.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 0-6"	Project: WNUC01519
Sample ID: 497413010	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 44.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		5.06	+/-0.577	0.109	0.500	pCi/g			MP2	11/30/19	0948	1942981	1
Uranium-235/236		0.394	+/-0.185	0.101	0.500	pCi/g							
Uranium-238		2.52	+/-0.408	0.112	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-3.08	+/-10.3	18.1	50.0	pCi/g			JJ3	12/01/19	2033	1943186	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			79.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 6-12"	Project: WNUC01519
Sample ID: 497413011	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 36.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.27	+/-0.296	0.131	0.500	pCi/g			MP2	11/29/19	0815	1942981	1
Uranium-235/236	U	0.0959	+/-0.103	0.117	0.500	pCi/g							
Uranium-238		1.56	+/-0.325	0.120	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	-1.57	+/-10.9	18.9	50.0	pCi/g			JJ3	12/01/19	2054	1943186	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			84.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-33 12-16"	Project: WNUC01519
Sample ID: 497413012	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 15:10	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 28.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.06	+/-0.247	0.111	0.500	pCi/g			MP2	12/02/19	1502	1942981	1
Uranium-235/236	U	0.0461	+/-0.0704	0.093	0.500	pCi/g							
Uranium-238		1.09	+/-0.248	0.0825	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-14.2	+/-17.5	31.2	50.0	pCi/g			JJ3	12/01/19	1438	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			90.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-34 0-6"	Project: WNUC01519
Sample ID: 497413013	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 16:10	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 47%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		3.13	+/-0.437	0.139	0.500	pCi/g			MP2	11/30/19	0948	1942981	1
Uranium-235/236	U	0.131	+/-0.115	0.135	0.500	pCi/g							
Uranium-238		1.81	+/-0.331	0.0862	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-12.1	+/-15.6	27.7	50.0	pCi/g			JJ3	12/01/19	1500	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			93.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-34 6-12"	Project: WNUC01519
Sample ID: 497413014	Client ID: WNUC009
Matrix: Soil	
Collect Date: 21-NOV-19 16:15	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 40.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.93	+/-0.509	0.188	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236	U	0.0487	+/-0.0958	0.133	0.500	pCi/g							
Uranium-238		1.73	+/-0.397	0.201	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-23.4	+/-23.4	42.0	50.0	pCi/g			JJ3	12/01/19	1522	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			51.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			92.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-35 0-6"	Project: WNUC01519
Sample ID: 497413015	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 08:40	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.26	+/-0.388	0.129	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236		0.179	+/-0.131	0.116	0.500	pCi/g							
Uranium-238		1.59	+/-0.326	0.119	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-2.83	+/-14.1	24.6	50.0	pCi/g			JJ3	12/01/19	1544	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			72.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-35 6-12"	Project: WNUC01519
Sample ID: 497413016	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 08:45	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 29.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.59	+/-0.381	0.151	0.500	pCi/g			MP2	12/04/19	0821	1942981	1
Uranium-235/236	U	0.0433	+/-0.0993	0.158	0.500	pCi/g							
Uranium-238		1.66	+/-0.392	0.178	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-16.4	+/-21.1	37.6	50.0	pCi/g			JJ3	12/01/19	1606	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			46.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-36 0-6"	Project: WNUC01519
Sample ID: 497413017	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:00	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 33.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		4.40	+/-0.545	0.111	0.500	pCi/g			MP2	11/30/19	0949	1942981	1
Uranium-235/236		0.210	+/-0.141	0.103	0.500	pCi/g							
Uranium-238		2.38	+/-0.401	0.0964	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-12.1	+/-14.3	25.5	50.0	pCi/g			JJ3	12/01/19	1628	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			95.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-36 6-12"	Project: WNUC01519
Sample ID: 497413018	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 10:05	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 31%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.50	+/-0.270	0.0943	0.500	pCi/g			MP2	11/30/19	0949	1942981	1
Uranium-235/236		0.0881	+/-0.080	0.0734	0.500	pCi/g							
Uranium-238		1.05	+/-0.225	0.0593	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-12	+/-13.3	23.8	50.0	pCi/g			JJ3	12/01/19	1650	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 0-6"	Project: WNUC01519
Sample ID: 497413019	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:20	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 41.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		4.88	+/-0.547	0.116	0.500	pCi/g		MP2		11/30/19	0949	1942981	1
Uranium-235/236		0.254	+/-0.144	0.0587	0.500	pCi/g							
Uranium-238		1.78	+/-0.331	0.0876	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-11.3	+/-13.8	24.6	50.0	pCi/g		JJ3		12/01/19	1712	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			71.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-37 6-12"	Project: WNUC01519
Sample ID: 497413020	Client ID: WNUC009
Matrix: Soil	
Collect Date: 22-NOV-19 11:25	
Receive Date: 22-NOV-19	
Collector: Client	
Moisture: 34.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.04	+/-0.343	0.118	0.500	pCi/g		MP2		11/30/19	0949	1942981	1
Uranium-235/236		0.149	+/-0.113	0.110	0.500	pCi/g							
Uranium-238		1.62	+/-0.304	0.0892	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-15.2	+/-16.4	29.4	50.0	pCi/g		JJ3		12/01/19	1734	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1327	1942654

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			81.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 9, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-37 6-12" DUP	Project:	WNUC01519
Sample ID:	497413021	Client ID:	WNUC009
Matrix:	Soil		
Collect Date:	22-NOV-19 11:25		
Receive Date:	22-NOV-19		
Collector:	Client		
Moisture:	34.2%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.33	+/-0.437	0.129	0.500	pCi/g			BXA4	12/03/19	0840	1942989	1
Uranium-235/236	U	0.0456	+/-0.0896	0.124	0.500	pCi/g							
Uranium-238		1.38	+/-0.339	0.138	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-23.7	+/-19.7	35.6	50.0	pCi/g			JJ3	12/01/19	1755	1943187	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/25/19	1326	1942870

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			64.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			97.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## QC Summary

Report Date: December 9, 2019

Page 1 of 22

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497413

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	1942542										
QC1204440751	497413001	DUP									
Fluoride	J	1.14	J	1.69	mg/kg	39.1	^	(+/-2.33)	LXA2	11/23/19	17:48
Nitrate-N	U	ND	U	ND	mg/kg	N/A					
QC1204440752	497413011	DUP									
Fluoride		1.56	U	ND	mg/kg	200*^		(+/-1.50)		11/24/19	00:45
Nitrate-N	U	ND	U	ND	mg/kg	N/A					
QC1204440753	497413021	DUP									
Fluoride	J	0.858	J	0.615	mg/kg	33	^	(+/-1.50)		11/26/19	20:19
Nitrate-N	U	ND	U	ND	mg/kg	N/A				11/24/19	07:42
QC1204440750	LCS										
Fluoride	25.0			26.7	mg/kg			107 (90%-110%)		11/23/19	17:18
Nitrate-N	25.0			27.5	mg/kg			110 (90%-110%)			
QC1204440749	MB										
Fluoride			U	ND	mg/kg					11/23/19	16:19
Nitrate-N			U	ND	mg/kg						
QC1204440754	497413001	MS									
Fluoride	59.4	J	1.14	23.6	mg/kg			37.7* (75%-125%)		11/23/19	18:17
Nitrate-N	59.4	U	ND	72.2	mg/kg			121 (75%-125%)			

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 497413

Page 2 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	1942542										
QC1204440755		497413011	MS								
Fluoride	36.0		1.56		21.4	mg/kg	55*	(75%-125%)	LXA2	11/24/19	01:15
Nitrate-N	36.0	U	ND		36.8	mg/kg	102	(75%-125%)			
QC1204440756		497413021	MS								
Fluoride	40.8	J	0.858		11.8	mg/kg	26.8*	(75%-125%)		11/26/19	20:49
Nitrate-N	40.8	U	ND		41.8	mg/kg	102	(75%-125%)		11/24/19	08:12
Batch	1944127										
QC1204444269		497413020	DUP								
Fluoride			1.60		1.91	mg/kg	18 ^	(+/-1.54)	CH5	11/30/19	01:42
Nitrate-N		U	ND	U	ND	mg/kg	N/A				
QC1204444270		497772001	DUP								
Fluoride			5.17		5.25	mg/kg	1.41 ^	(+/-3.64)		11/30/19	03:12
Nitrate-N		U	ND	U	ND	mg/kg	N/A				
QC1204444268		LCS									
Fluoride	24.6				24.7	mg/kg	100	(90%-110%)		11/30/19	00:43
Nitrate-N	24.6				23.9	mg/kg	97.2	(90%-110%)			
QC1204444267		MB									
Fluoride				U	ND	mg/kg				11/30/19	00:13
Nitrate-N				U	ND	mg/kg					
QC1204444271		497413020	MS								
Fluoride	37.9		1.60		15.5	mg/kg	36.7*	(75%-125%)		11/30/19	02:12

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## QC Summary

Workorder: 497413

Page 3 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	1944127										
Nitrate-N	37.9	U	ND	35.7	mg/kg		94.2	(75%-125%)	CH5	11/30/19	02:12
QC120444272 497772001 MS											
Fluoride	90.0		5.17	45.9	mg/kg		45.3*	(75%-125%)		11/30/19	03:42
Nitrate-N	90.0	U	ND	85.4	mg/kg		94.9	(75%-125%)			
<b>Metals Analysis - ICPMS</b>											
Batch	1942804										
QC1204441316 LCS											
Uranium-235	33.6			33.2	ug/kg		98.6	(80%-120%)	PRB	12/08/19	16:48
Uranium-238	4640			4430	ug/kg		95.5	(80%-120%)			
QC1204442597 LCS											
Uranium-234	55.0			54.6	ug/kg		99.3	(80%-120%)		12/09/19	14:09
QC1204441315 MB											
Uranium-234			U	ND	ug/kg					12/09/19	14:07
Uranium-235			U	ND	ug/kg					12/08/19	16:47
Uranium-238			U	ND	ug/kg						
QC1204441317 497413001 MS											
Uranium-235	83.2		86.4	232	ug/kg		175*	(75%-125%)		12/08/19	16:52
Uranium-238	11500		6030	21000	ug/kg		130*	(75%-125%)			
QC1204442638 497413001 MS											
Uranium-234	127	U	ND	145	ug/kg		113	(75%-125%)		12/09/19	14:13

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 497413

Page 4 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis - ICPMS</b>											
Batch	1942804										
QC1204441318	497413001	MSD									
Uranium-235	82.1	86.4		186	ug/kg	21.8*	122	(0%-20%)	PRB	12/08/19	16:54
Uranium-238	11300	6030		19300	ug/kg	8.47	117	(0%-20%)			
QC1204442639	497413001	MSD									
Uranium-234	130	U	ND	136	ug/kg	6.16	104	(0%-20%)		12/09/19	14:15
QC1204450273	497413001	PS									
Uranium-235	0.180	0.178		0.384	ug/L		115	(75%-125%)		12/08/19	16:55
Uranium-238	24.8	12.4		40.8	ug/L		114	(75%-125%)			
QC1204441319	497413001	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/09/19	14:17
Uranium-235		0.178	J	0.0307	ug/L	13.6		(0%-20%)		12/08/19	16:57
Uranium-238		12.4		2.13	ug/L	14.1		(0%-20%)			
Batch	1942806										
QC1204441321	LCS										
Uranium-235	33.6			32.9	ug/kg		97.8	(80%-120%)	PRB	12/08/19	17:23
Uranium-238	4640			4260	ug/kg		91.8	(80%-120%)			
QC1204442640	LCS										
Uranium-234	51.6			50.5	ug/kg		97.8	(80%-120%)		12/08/19	23:46
QC1204441320	MB										
Uranium-234			U	ND	ug/kg					12/08/19	23:44
Uranium-235			U	ND	ug/kg					12/08/19	17:21

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2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 5 of 22

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis - ICPMS</b>											
Batch 1942806											
Uranium-238			U	ND	ug/kg				PRB	12/08/19	17:21
QC1204441322	497413011	MS									
Uranium-235	55.3	21.8		85.6	ug/kg		115	(75%-125%)		12/08/19	17:26
Uranium-238	7630	2750		11400	ug/kg		113	(75%-125%)			
QC1204442641	497413011	MS									
Uranium-234	79.5	U	ND	96.6	ug/kg		121	(75%-125%)		12/08/19	23:50
QC1204441323	497413011	MSD									
Uranium-235	52.7	21.8		83.2	ug/kg	2.88	116	(0%-20%)		12/08/19	17:28
Uranium-238	7270	2750		11100	ug/kg	2.01	115	(0%-20%)			
QC1204442642	497413011	MSD									
Uranium-234	82.7	U	ND	96.3	ug/kg	0.345	116	(0%-20%)		12/08/19	23:52
QC1204441324	497413011	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/08/19	23:54
Uranium-235		0.0744	J	0.0138	ug/L	7.26		(0%-20%)		12/08/19	17:31
Uranium-238		9.37		1.67	ug/L	11		(0%-20%)			
<b>Metals Analysis-ICP</b>											
Batch 1942808											
QC1204441326	LCS										
Aluminum	478000			466000	ug/kg		97.4	(80%-120%)	TXT1	12/03/19	18:16
Antimony	47800			46300	ug/kg		96.8	(80%-120%)			

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2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 6 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Arsenic	47800			44300	ug/kg		92.6	(80%-120%)	TXT1	12/03/19	18:16
Barium	47800			46900	ug/kg		98.2	(80%-120%)			
Beryllium	47800			47900	ug/kg		100	(80%-120%)			
Cadmium	47800			46400	ug/kg		97.1	(80%-120%)			
Calcium	478000			473000	ug/kg		99	(80%-120%)			
Chromium	47800			46500	ug/kg		97.2	(80%-120%)			
Cobalt	47800			47000	ug/kg		98.4	(80%-120%)			
Copper	47800			47800	ug/kg		100	(80%-120%)			
Iron	478000			467000	ug/kg		97.7	(80%-120%)			
Lead	47800			46500	ug/kg		97.3	(80%-120%)			
Magnesium	478000			474000	ug/kg		99.1	(80%-120%)			
Manganese	47800			46400	ug/kg		97	(80%-120%)			
Nickel	47800			46700	ug/kg		97.7	(80%-120%)			
Potassium	478000			464000	ug/kg		97	(80%-120%)			
Selenium	47800			44600	ug/kg		93.4	(80%-120%)			



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 7 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Silver	9560			9360	ug/kg		97.9	(80%-120%)	TXT1	12/04/19	11:11
Sodium	478000			460000	ug/kg		96.2	(80%-120%)		12/03/19	18:16
Thallium	47800			46700	ug/kg		97.8	(80%-120%)			
Vanadium	47800			47000	ug/kg		98.4	(80%-120%)			
Zinc	47800			45600	ug/kg		95.5	(80%-120%)			
QC1204441325 MB											
Aluminum			U	ND	ug/kg					12/03/19	18:12
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						
Calcium			U	ND	ug/kg						
Chromium			U	ND	ug/kg						
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 8 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Iron			U	ND	ug/kg				TXT1	12/03/19	18:12
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						
Manganese			U	ND	ug/kg						
Nickel			U	ND	ug/kg						
Potassium			U	ND	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg					12/04/19	11:07
Sodium			J	7720	ug/kg					12/03/19	18:12
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1204441327 497413001 MS											
Aluminum	1160000			25900000	44300000	ug/kg		N/A (75%-125%)		12/03/19	18:28
Antimony	116000	U		ND	98500	ug/kg		84.7 (75%-125%)			
Arsenic	116000	J		4240	104000	ug/kg		86 (75%-125%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 9 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Barium	116000	207000		336000	ug/kg		110	(75%-125%)	TXT1	12/03/19	18:28
Beryllium	116000	1830		112000	ug/kg		94.6	(75%-125%)			
Cadmium	116000	U	ND	106000	ug/kg		90.9	(75%-125%)			
Calcium	1160000	809000		2010000	ug/kg		103	(75%-125%)			
Chromium	116000	33800		144000	ug/kg		95	(75%-125%)			
Cobalt	116000	8360		116000	ug/kg		93	(75%-125%)			
Copper	116000	27900		146000	ug/kg		101	(75%-125%)			
Iron	1160000	17600000		21800000	ug/kg		N/A	(75%-125%)			
Lead	116000	28200		137000	ug/kg		93.6	(75%-125%)			
Magnesium	1160000	2800000		4070000	ug/kg		110	(75%-125%)			
Manganese	116000	223000		346000	ug/kg		106	(75%-125%)			
Nickel	116000	15200		128000	ug/kg		96.7	(75%-125%)			
Potassium	1160000	1400000		2580000	ug/kg		101	(75%-125%)			
Selenium	116000	U	ND	102000	ug/kg		87.6	(75%-125%)			
Silver	23200	U	ND	21300	ug/kg		91.7	(75%-125%)		12/04/19	11:17

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 10 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Sodium	1160000	125000		1190000	ug/kg		91.7	(75%-125%)	TXT1	12/03/19	18:28
Thallium	116000	U	ND	104000	ug/kg		89.3	(75%-125%)		12/03/19	18:40
Vanadium	116000	85600		198000	ug/kg		97	(75%-125%)		12/03/19	18:28
Zinc	116000	69100		187000	ug/kg		102	(75%-125%)			
QC1204441328	497413001	MSD									
Aluminum	1200000	25900000		48400000	ug/kg	8.76	N/A	(0%-20%)		12/03/19	18:31
Antimony	120000	U	ND	95500	ug/kg	3.05	79.4	(0%-20%)			
Arsenic	120000	J	4240	105000	ug/kg	0.499	83.5	(0%-20%)			
Barium	120000	207000		335000	ug/kg	0.0602	107	(0%-20%)			
Beryllium	120000	1830		112000	ug/kg	0.232	91.6	(0%-20%)			
Cadmium	120000	U	ND	105000	ug/kg	0.753	87.2	(0%-20%)			
Calcium	1200000	809000		1790000	ug/kg	11.7	81.4	(0%-20%)			
Chromium	120000	33800		149000	ug/kg	3.42	96	(0%-20%)			
Cobalt	120000	8360		117000	ug/kg	0.229	90.1	(0%-20%)			
Copper	120000	27900		149000	ug/kg	2.43	101	(0%-20%)			
Iron	1200000	17600000		21100000	ug/kg	3.69	N/A	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 11 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Lead	120000	28200		139000	ug/kg	1.59	92.3	(0%-20%)	TXT1	12/03/19	18:31
Magnesium	1200000	2800000		4270000	ug/kg	4.6	122	(0%-20%)			
Manganese	120000	223000		322000	ug/kg	7.11	82.6	(0%-20%)			
Nickel	120000	15200		129000	ug/kg	1.27	94.8	(0%-20%)			
Potassium	1200000	1400000		2630000	ug/kg	1.84	102	(0%-20%)			
Selenium	120000	U	ND	103000	ug/kg	0.677	85.2	(0%-20%)			
Silver	24100	U	ND	20500	ug/kg	4	85.2	(0%-20%)		12/04/19	11:20
Sodium	1200000	125000		1190000	ug/kg	0.0989	88.5	(0%-20%)		12/03/19	18:31
Thallium	120000	U	ND	100000	ug/kg	3.27	83.5	(0%-20%)		12/03/19	18:43
Vanadium	120000	85600		205000	ug/kg	3.45	99.5	(0%-20%)		12/03/19	18:31
Zinc	120000	69100		191000	ug/kg	1.83	101	(0%-20%)			
QC1204441329 497413001 SDILT											
Aluminum		107000		23300	ug/L	9.2		(0%-20%)		12/03/19	18:35
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		J	17.5	U	ND	ug/L	N/A	(0%-20%)			
Barium		855		185	ug/L	8.46		(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 12 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Beryllium		7.53	J	1.62	ug/L	7.77		(0%-20%)	TXT1	12/03/19	18:35
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium		3340		718	ug/L	7.58		(0%-20%)			
Chromium		140		30.4	ug/L	9.05		(0%-20%)			
Cobalt		34.5		7.97	ug/L	15.5		(0%-20%)			
Copper		115		23.7	ug/L	2.96		(0%-20%)			
Iron		72600		15700	ug/L	7.99		(0%-20%)			
Lead		116		25.3	ug/L	8.86		(0%-20%)			
Magnesium		11600		2520	ug/L	9.11		(0%-20%)			
Manganese		920		201	ug/L	9.07		(0%-20%)			
Nickel		62.9		13.9	ug/L	10.3		(0%-20%)			
Potassium		5790		1250	ug/L	7.96		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/04/19	11:22
Sodium		514	J	151	ug/L	46.8		(0%-20%)		12/03/19	18:35

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 13 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942808										
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)	TXT1	12/03/19	18:49
Vanadium		353		74.9	ug/L	6.09		(0%-20%)		12/03/19	18:35
Zinc		285		63.3	ug/L	11.1		(0%-20%)			
<hr/>											
Batch	1942810										
QC1204441331	LCS										
Aluminum	469000			472000	ug/kg		101	(80%-120%)	TXT1	12/05/19	16:44
Antimony	46900			45700	ug/kg		97.5	(80%-120%)			
Arsenic	46900			44500	ug/kg		94.8	(80%-120%)			
Barium	46900			46400	ug/kg		98.9	(80%-120%)			
Beryllium	46900			47600	ug/kg		102	(80%-120%)			
Cadmium	46900			45800	ug/kg		97.6	(80%-120%)			
Calcium	469000			473000	ug/kg		101	(80%-120%)			
Chromium	46900			46200	ug/kg		98.6	(80%-120%)			
Cobalt	46900			46300	ug/kg		98.8	(80%-120%)			
Copper	46900			47700	ug/kg		102	(80%-120%)			
Iron	469000			468000	ug/kg		99.8	(80%-120%)			
Lead	46900			45000	ug/kg		96	(80%-120%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 14 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942810										
Magnesium	469000			466000	ug/kg		99.3	(80%-120%)	TXT1	12/05/19	16:44
Manganese	46900			46400	ug/kg		99	(80%-120%)			
Nickel	46900			46400	ug/kg		98.9	(80%-120%)			
Potassium	469000			479000	ug/kg		102	(80%-120%)			
Selenium	46900			43900	ug/kg		93.6	(80%-120%)			
Silver	9380			9250	ug/kg		98.6	(80%-120%)			
Sodium	469000			456000	ug/kg		97.1	(80%-120%)			
Thallium	46900			46000	ug/kg		98.2	(80%-120%)			
Vanadium	46900			46700	ug/kg		99.5	(80%-120%)			
Zinc	46900			45300	ug/kg		96.6	(80%-120%)			
QC1204441330	MB										
Aluminum			U	ND	ug/kg					12/05/19	16:40
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 15 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942810										
Cadmium			U	ND	ug/kg				TXT1	12/05/19	16:40
Calcium			U	ND	ug/kg						
Chromium			U	ND	ug/kg						
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Iron			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						
Manganese			U	ND	ug/kg						
Nickel			U	ND	ug/kg						
Potassium			J	7140	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg						
Sodium			U	ND	ug/kg						
Thallium			U	ND	ug/kg						

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 16 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942810										
Vanadium			U	ND	ug/kg				TXT1	12/05/19	16:40
Zinc			U	ND	ug/kg						
QC1204441332 497413011 MS											
Aluminum	771000	18200000		25500000	ug/kg		N/A	(75%-125%)		12/05/19	16:57
Antimony	77100	U	ND	65900	ug/kg		85.4	(75%-125%)		12/05/19	17:09
Arsenic	77100	J	3270	66500	ug/kg		82	(75%-125%)		12/05/19	16:57
Barium	77100		163000	228000	ug/kg		85.1	(75%-125%)			
Beryllium	77100		2070	70500	ug/kg		88.8	(75%-125%)			
Cadmium	77100	U	ND	65300	ug/kg		84.7	(75%-125%)			
Calcium	771000		182000	869000	ug/kg		89.1	(75%-125%)			
Chromium	77100		25600	93600	ug/kg		88.2	(75%-125%)			
Cobalt	77100		13800	80200	ug/kg		86.1	(75%-125%)			
Copper	77100		19300	92600	ug/kg		95	(75%-125%)			
Iron	771000		29100000	31700000	ug/kg		N/A	(75%-125%)			
Lead	77100		11700	77300	ug/kg		85	(75%-125%)			
Magnesium	771000		3590000	4240000	ug/kg		N/A	(75%-125%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 17 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942810										
Manganese	77100	281000		350000	ug/kg		89.2	(75%-125%)	TXT1	12/05/19	16:57
Nickel	77100	12100		80200	ug/kg		88.3	(75%-125%)			
Potassium	771000	1700000		2410000	ug/kg		92.1	(75%-125%)			
Selenium	77100	U	ND	60600	ug/kg		77.8	(75%-125%)			
Silver	15400	U	ND	10200	ug/kg		65.8*	(75%-125%)		12/05/19	17:09
Sodium	771000	59700		742000	ug/kg		88.5	(75%-125%)		12/05/19	16:57
Thallium	77100	U	ND	53900	ug/kg		69.9*	(75%-125%)		12/05/19	17:09
Vanadium	77100	74400		139000	ug/kg		84.2	(75%-125%)		12/05/19	16:57
Zinc	77100	52600		122000	ug/kg		90.2	(75%-125%)			
QC1204441333	497413011	MSD									
Aluminum	727000	18200000		25200000	ug/kg	1.1	N/A	(0%-20%)		12/05/19	16:59
Antimony	72700	U	ND	64500	ug/kg	2.21	88.6	(0%-20%)		12/05/19	17:12
Arsenic	72700	J	3270	63000	ug/kg	5.31	82.2	(0%-20%)		12/05/19	16:59
Barium	72700	163000		219000	ug/kg	4.14	77.5	(0%-20%)			
Beryllium	72700	2070		66700	ug/kg	5.54	88.9	(0%-20%)			
Cadmium	72700	U	ND	61000	ug/kg	6.89	83.9	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497413

Page 18 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942810										
Calcium	727000	182000		820000	ug/kg	5.8	87.8	(0%-20%)	TXT1	12/05/19	16:59
Chromium	72700	25600		89100	ug/kg	4.95	87.4	(0%-20%)			
Cobalt	72700	13800		75600	ug/kg	5.95	85	(0%-20%)			
Copper	72700	19300		87500	ug/kg	5.68	93.7	(0%-20%)			
Iron	727000	29100000		29700000	ug/kg	6.36	N/A	(0%-20%)			
Lead	72700	11700		74100	ug/kg	4.24	85.8	(0%-20%)			
Magnesium	727000	3590000		4130000	ug/kg	2.62	N/A	(0%-20%)			
Manganese	72700	281000		330000	ug/kg	5.98	66.7*	(0%-20%)			
Nickel	72700	12100		75600	ug/kg	6	87.3	(0%-20%)			
Potassium	727000	1700000		2320000	ug/kg	3.74	85.5	(0%-20%)			
Selenium	72700	U	ND	57100	ug/kg	5.9	77.7	(0%-20%)			
Silver	14500	U	ND	10200	ug/kg	0.143	69.9*	(0%-20%)		12/05/19	17:12
Sodium	727000	59700		690000	ug/kg	7.27	86.7	(0%-20%)		12/05/19	16:59
Thallium	72700	U	ND	52200	ug/kg	3.24	71.8*	(0%-20%)		12/05/19	17:12
Vanadium	72700	74400		133000	ug/kg	4.64	80.6	(0%-20%)		12/05/19	16:59

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## QC Summary

Workorder: 497413

Page 19 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942810										
Zinc	72700	52600		117000	ug/kg	4.37	88.5	(0%-20%)	TXT1	12/05/19	16:59
QC1204446774 497413011 PS											
Manganese	500	1860		2270	ug/L		83.2	(75%-125%)		12/05/19	17:02
Silver	100	U	ND	90.6	ug/L		90.6	(75%-125%)		12/05/19	17:15
Thallium	500	U	ND	465	ug/L		93	(75%-125%)			
QC1204441334 497413011 SDILT											
Aluminum		120000		27300	ug/L	13.4		(0%-20%)		12/05/19	17:04
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/05/19	17:18
Arsenic		J	21.6	J	7.39	ug/L	70.8	(0%-20%)		12/05/19	17:04
Barium			1080		242	ug/L	12.5	(0%-20%)			
Beryllium			13.7	J	3.03	ug/L	10.6	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			1200		273	ug/L	13.6	(0%-20%)			
Chromium			169		38.0	ug/L	12.5	(0%-20%)			
Cobalt			91.5		21.0	ug/L	14.8	(0%-20%)			
Copper			128		27.2	ug/L	6.79	(0%-20%)			

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## QC Summary

Workorder: 497413

Page 20 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1942810										
Iron		192000		43800	ug/L	13.9		(0%-20%)	TXT1	12/05/19	17:04
Lead		77.3	J	16.7	ug/L	7.73		(0%-20%)			
Magnesium		23700		5380	ug/L	13.5		(0%-20%)			
Manganese		1860		422	ug/L	13.4		(0%-20%)			
Nickel		80.2		18.8	ug/L	17.2		(0%-20%)			
Potassium		11200		2520	ug/L	12		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/05/19	17:18
Sodium		395	J	76.1	ug/L	3.59		(0%-20%)		12/05/19	17:04
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/05/19	17:18
Vanadium		492		109	ug/L	10.4		(0%-20%)		12/05/19	17:04
Zinc		348		80.0	ug/L	15		(0%-20%)			

**Nutrient Analysis**

Batch 1942607

QC1204440862	LCS										
Nitrogen, Ammonia		50.0		48.8	mg/kg		97.6	(90%-110%)	AXH3	11/26/19	05:52
QC1204440863	LCSD										
Nitrogen, Ammonia		50.0		49.1	mg/kg	0.511	98.1	(0%-20%)		11/26/19	05:53

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## QC Summary

Workorder: 497413

Page 21 of 22

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Nutrient Analysis</b>											
Batch	1942607										
QC1204440861	MB										
Nitrogen, Ammonia			J	1.12	mg/kg				AXH3	11/26/19	05:51
<hr/>											
Batch	1942616										
QC1204440875	497413001	DUP									
Nitrogen, Ammonia		455		451	mg/kg	0.803		(0%-20%)	AXH3	11/26/19	07:21
QC1204440876	497413002	DUP									
Nitrogen, Ammonia		287		302	mg/kg	4.86		(0%-20%)		11/26/19	07:33
QC1204440874	LCS										
Nitrogen, Ammonia	50.0			49.9	mg/kg		99.8	(90%-110%)		11/26/19	07:15
QC1204440873	MB										
Nitrogen, Ammonia			J	1.40	mg/kg					11/26/19	07:14
QC1204440877	497413001	MS									
Nitrogen, Ammonia	105	455		608	mg/kg		N/A	(90%-110%)		11/26/19	07:22
QC1204440878	497413002	MS									
Nitrogen, Ammonia	73.6	287		330	mg/kg		57.6*	(90%-110%)		11/26/19	07:34

**Notes:**

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits

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## QC Summary

Workorder: 497413

Page 22 of 22

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	Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
e	5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.  
 ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.  
 \* Indicates that a Quality Control parameter was not within specifications.  
 For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



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## QC Summary

Report Date: December 9, 2019

Page 1 of 3

Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497413

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<hr/>											
Rad Alpha Spec											
Batch	1942981										
QC1204441750 497413001 DUP											
Uranium-233/234		6.23		5.35	pCi/g	15.3		(0%-20%)	MP2	11/30/19	09:49
	Uncertainty	+/-0.633		+/-0.538							
Uranium-235/236		0.313		0.338	pCi/g	7.6		(0% - 100%)			
	Uncertainty	+/-0.167		+/-0.156							
Uranium-238		2.51		2.63	pCi/g	4.58		(0%-20%)			
	Uncertainty	+/-0.402		+/-0.378							
QC1204441751 LCS											
Uranium-233/234				4.99	pCi/g					11/30/19	09:49
	Uncertainty			+/-0.523							
Uranium-235/236				0.287	pCi/g						
	Uncertainty			+/-0.145							
Uranium-238	5.25			5.45	pCi/g		104	(75%-125%)			
	Uncertainty			+/-0.544							
QC1204441749 MB											
Uranium-233/234			U	-0.046	pCi/g					11/30/19	09:49
	Uncertainty			+/-0.0415							
Uranium-235/236			U	-0.0102	pCi/g						
	Uncertainty			+/-0.045							
Uranium-238			U	-0.0371	pCi/g						
	Uncertainty			+/-0.0422							
<hr/>											
Batch	1942989										
QC1204441776 497413021 DUP											
Uranium-233/234		2.33		2.05	pCi/g	12.9		(0%-20%)	BXA4	12/03/19	08:40
	Uncertainty	+/-0.437		+/-0.387							
Uranium-235/236	U	0.0456	U	0.0182	pCi/g	N/A		N/A			
	Uncertainty	+/-0.0896		+/-0.0814							
Uranium-238		1.38		1.26	pCi/g	9.44		(0%-20%)			
	Uncertainty	+/-0.339		+/-0.302							

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## QC Summary

Workorder: 497413

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1942989										
QC1204441777	LCS										
Uranium-233/234				5.19	pCi/g				BXA4	11/27/19	13:18
	Uncertainty			+/-0.627							
Uranium-235/236				0.286	pCi/g						
	Uncertainty			+/-0.171							
Uranium-238	5.19			4.91	pCi/g		94.6	(75%-125%)			
	Uncertainty			+/-0.609							
QC1204441775	MB										
Uranium-233/234			U	0.00276	pCi/g					11/27/19	13:18
	Uncertainty			+/-0.0632							
Uranium-235/236			U	0.00	pCi/g						
	Uncertainty			+/-0.0549							
Uranium-238			U	0.0224	pCi/g						
	Uncertainty			+/-0.0625							
<b>Rad Liquid Scintillation</b>											
Batch	1943186										
QC1204442273	497413002		DUP								
Technetium-99	U	-5.08	U	-10.4	pCi/g	N/A			N/A	JJ3	12/01/19 21:38
	Uncertainty	+/-14.2		+/-22.5							
QC1204442274	LCS										
Technetium-99	330			304	pCi/g		92.2	(75%-125%)		12/01/19	22:00
	Uncertainty			+/-17.3							
QC1204442272	MB										
Technetium-99			U	2.22	pCi/g					12/01/19	21:16
	Uncertainty			+/-9.37							
Batch	1943187										
QC1204442276	497413012		DUP								
Technetium-99	U	-14.2	U	-23	pCi/g	N/A			N/A	JJ3	12/01/19 18:39
	Uncertainty	+/-17.5		+/-18.6							
QC1204442277	LCS										
Technetium-99	480			450	pCi/g		93.8	(75%-125%)		12/01/19	19:01
	Uncertainty			+/-25.4							
QC1204442275	MB										
Technetium-99			U	-12.3	pCi/g					12/01/19	18:17
	Uncertainty			+/-13.4							

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## QC Summary

Workorder: 497413

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative  
Westinghouse Electric Co, LLC  
SDG #: 497413**

## **Metals**

**Product: Determination of Metals by ICP**

**Analytical Method:** SW846 3050B/6010D

**Analytical Procedure:** GL-MA-E-013 REV# 31

**Analytical Batch:** 1942808

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1942807

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
1204441325	Method Blank (MB)ICP
1204441326	Laboratory Control Sample (LCS)
1204441329	497413001(SED-29 0-6L) Serial Dilution (SD)
1204441327	497413001(SED-29 0-6S) Matrix Spike (MS)
1204441328	497413001(SED-29 0-6SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Calibration Information**

#### **CRDL/PQL Requirements**

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of thallium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

### **Technical Information**

#### **Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that

will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples required dilutions in order to minimize suppression of silver and thallium due to matrix interferences. 497413001 (SED-29 0-6), 497413002 (SED-29 6-12"), 497413003 (SED-29 12-16"), 497413004 (SED-30 0-6"), 497413005 (SED-30 6-12"), 497413008 (SED-32 0-6") and 497413009 (SED-32 6-12"). Sample required dilution in order to minimize suppression of antimony, silver and thallium due to matrix interferences. 497413010 (SED-33 0-6"). Samples required dilutions in order to minimize suppression of antimony, silver and thallium due to matrix interferences, and due to over range potassium. 497413006 (SED-31 0-6") and 497413007 (SED-31 6-12").

Analyte	497413									
	001	002	003	004	005	006	007	008	009	010
Antimony	1X	1X	1X	1X	1X	10X	10X	1X	1X	10X
Potassium	1X	1X	1X	1X	1X	10X	10X	1X	1X	1X
Silver	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X
Thallium	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

**Product: Determination of Metals by ICP**

**Analytical Method:** SW846 3050B/6010D

**Analytical Procedure:** GL-MA-E-013 REV# 31

**Analytical Batch:** 1942810

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1942809

The following samples were analyzed using the above methods and analytical procedure(s).

<b>GEL Sample ID#</b>	<b>Client Sample Identification</b>
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
497413021	SED-37 6-12" DUP
1204441330	Method Blank (MB) <b>ICP</b>
1204441331	Laboratory Control Sample (LCS)
1204441334	497413011(SED-33 6-12"L) Serial Dilution (SD)
1204441332	497413011(SED-33 6-12"S) Matrix Spike (MS)
1204441333	497413011(SED-33 6-12"SD) Matrix Spike Duplicate (MSD)
1204446774	497413011(SED-33 6-12"PS) Post Spike (PS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Calibration Information**

**CRDL/PQL Requirements**

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

**Quality Control (QC) Information**

**Matrix Spike (MS/MSD) Recovery Statement**

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analytes. The post spike recoveries were within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recoveries may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204441332 (SED-33 6-12"MS)	Silver	65.8* (75%-125%)
	Thallium	69.9* (75%-125%)
1204441333 (SED-33 6-12"MSD)	Manganese	66.7* (75%-125%)
	Silver	69.9* (75%-125%)
	Thallium	71.8* (75%-125%)

**Technical Information**

**Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples required dilutions in order to minimize suppression of silver, antimony and thallium due to matrix interferences. 497413011 (SED-33 6-12"), 497413014 (SED-34 6-12"), 497413015 (SED-35 0-6"), 497413016 (SED-35 6-12"), 497413018 (SED-36 6-12"), 497413020 (SED-37 6-12") and 497413021 (SED-37 6-12" DUP). Samples required dilutions in order to minimize suppression of silver and thallium due to matrix interferences. 497413012 (SED-33 12-16"), 497413013 (SED-34 0-6"), 497413017 (SED-36 0-6") and 497413019 (SED-37 0-6").

Analyte	497413									
	011	012	013	014	015	016	017	018	019	020

Antimony	10X	1X	1X	10X	10X	10X	1X	10X	1X	10X
Silver	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X
Thallium	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Analyte	<b>497413</b>
	<b>021</b>
Antimony	10X
Silver	10X
Thallium	10X

**Product: Determination of Metals by ICP-MS**

**Analytical Method:** SW846 3050B/6020B

**Analytical Procedure:** GL-MA-E-014 REV# 33

**Analytical Batch:** 1942804

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1942803

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
1204441315	Method Blank (MB) <b>ICP-MS</b>
1204441316	Laboratory Control Sample (LCS)
1204442597	Laboratory Control Sample (LCS)
1204441319	497413001(SED-29 0-6L) Serial Dilution (SD)
1204441317	497413001(SED-29 0-6S) Matrix Spike (MS)
1204442638	497413001(SED-29 0-6S) Matrix Spike (MS)
1204441318	497413001(SED-29 0-6SD) Matrix Spike Duplicate (MSD)
1204442639	497413001(SED-29 0-6SD) Matrix Spike Duplicate (MSD)
1204450273	497413001(SED-29 0-6PS) Post Spike (PS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Calibration Information**

**ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

**Quality Control (QC) Information****Matrix Spike (MS/MSD) Recovery Statement**

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204441317 (SED-29 0-6MS)	Uranium-235	175* (75%-125%)
	Uranium-238	130* (75%-125%)

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204441317MS and 1204441318MSD (SED-29 0-6)	Uranium-235	RPD 21.8* (0%-20%)

**Technical Information****Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 497413010 (SED-33 0-6") was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	497413									
	001	002	003	004	005	006	007	008	009	010
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	10X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

**Product: Determination of Metals by ICP-MS**



**Analytical Method:** SW846 3050B/6020B

**Analytical Procedure:** GL-MA-E-014 REV# 33

**Analytical Batch:** 1942806

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1942805

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
497413021	SED-37 6-12" DUP
1204441320	Method Blank (MB) <b>ICP-MS</b>
1204441321	Laboratory Control Sample (LCS)
1204442640	Laboratory Control Sample (LCS)
1204441324	497413011(SED-33 6-12"L) Serial Dilution (SD)
1204441322	497413011(SED-33 6-12"S) Matrix Spike (MS)
1204442641	497413011(SED-33 6-12"S) Matrix Spike (MS)
1204441323	497413011(SED-33 6-12"SD) Matrix Spike Duplicate (MSD)
1204442642	497413011(SED-33 6-12"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

#### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

#### **Calibration Information**

##### **ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

#### **Technical Information**

##### **Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

##### **Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. The ICPMS solid samples in this SDG were

diluted the standard two times.

Analyte	497413									
	011	012	013	014	015	016	017	018	019	020
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	497413
	021
Uranium-234	2X
Uranium-235	2X
Uranium-238	2X

## General Chemistry

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batches:** 1942542 and 1942541

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413021	SED-37 6-12" DUP
1204440749	Method Blank (MB)
1204440750	Laboratory Control Sample (LCS)
1204440751	497413001(SED-29 0-6) Sample Duplicate (DUP)
1204440752	497413011(SED-33 6-12") Sample Duplicate (DUP)
1204440753	497413021(SED-37 6-12" DUP) Sample Duplicate (DUP)
1204440754	497413001(SED-29 0-6) Matrix Spike (MS)
1204440755	497413011(SED-33 6-12") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Calibration Information**

#### **Calibration Verification Information (CCV)**

One or more of the calibration verification standards was above the required limits. The results for the following samples bracketed by the failing CCV are less than the MDL or are QC samples associated with these samples. Therefore, the data is deemed acceptable. 497413017 (SED-36 0-6") and 497413018 (SED-36 6-12").

### **Quality Control (QC) Information**

#### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204440754 (SED-29 0-6MS)	37.7* (75%-125%)
	1204440755 (SED-33 6-12"MS)	55* (75%-125%)
	1204440756 (SED-37 6-12" DUPMS)	26.8* (75%-125%)

#### **Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Fluoride	1204440752 (SED-33 6-12"DUP)	abs(0 - 1.56)* (+/-1.5 mg/kg)

### **Technical Information**

#### **Sample Re-analysis**

Samples 1204440753 (SED-37 6-12" DUPDUP), 1204440756 (SED-37 6-12" DUPMS), 497413015 (SED-35 0-6"), 497413016 (SED-35 6-12"), 497413019 (SED-37 0-6") and 497413021 (SED-37 6-12" DUP) were re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

### **Miscellaneous Information**

#### **Manual Integrations**

Samples 1204440750 (LCS) and 1204440756 (SED-37 6-12" DUPMS) were manually integrated to correctly position the baseline as set in the calibration standards.

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batches:** 1944127 and 1944124

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413020	SED-37 6-12"
1204444267	Method Blank (MB)
1204444268	Laboratory Control Sample (LCS)
1204444269	497413020(SED-37 6-12") Sample Duplicate (DUP)
1204444270	497772001(SED-38 0) Sample Duplicate (DUP)
1204444271	497413020(SED-37 6-12") Matrix Spike (MS)
1204444272	497772001(SED-38 0) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

<b>Analyte</b>	<b>Sample</b>	<b>Value</b>
Fluoride	1204444271 (SED-37 6-12"MS)	36.7* (75%-125%)
	1204444272 (SED-38 0MS)	45.3* (75%-125%)

**Miscellaneous Information**

**Manual Integrations**

Samples 1204444268 (LCS) and 497413020 (SED-37 6-12") were manually integrated to correctly position the baseline as set in the calibration standards.

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1 Modified

**Preparation Procedure:** GL-GC-E-106 REV# 10

**Preparation Batch:** 1942607

**Preparation Method:** EPA 350.2 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 1942606

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413021	SED-37 6-12" DUP
1204440861	Method Blank (MB)
1204440862	Laboratory Control Sample (LCS)
1204440863	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Laboratory Control Sample Duplicate (LCSD)**

An LCSD was used in place of matrix QC due to the high activity of the sample matrix (ALARA).

**Technical Information**

**Sample Dilutions**

The following sample 497413021 (SED-37 6-12" DUP) was diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	497413
	021
Nitrogen, Ammonia	5X

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1 Modified

**Preparation Procedure:** GL-GC-E-106 REV# 10

**Preparation Batch:** 1942616

**Preparation Method:** EPA 350.2 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 1942615

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"

497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
1204440873	Method Blank (MB)
1204440874	Laboratory Control Sample (LCS)
1204440875	497413001(SED-29 0-6) Sample Duplicate (DUP)
1204440876	497413002(SED-29 6-12") Sample Duplicate (DUP)
1204440877	497413001(SED-29 0-6) Matrix Spike (MS)
1204440878	497413002(SED-29 6-12") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Nitrogen, Ammonia	1204440878 (SED-29 6-12"MS)	57.6* (90%-110%)

**Technical Information**

**Sample Dilutions**

The following samples 1204440875 (SED-29 0-6DUP), 1204440876 (SED-29 6-12"DUP), 1204440877 (SED-29 0-6MS), 1204440878 (SED-29 6-12"MS), 497413001 (SED-29 0-6), 497413002 (SED-29 6-12"), 497413003 (SED-29 12-16"), 497413004 (SED-30 0-6"), 497413005 (SED-30 6-12"), 497413006 (SED-31 0-6"), 497413007 (SED-31 6-12"), 497413008 (SED-32 0-6"), 497413009 (SED-32 6-12"), 497413010 (SED-33 0-6"), 497413013 (SED-34 0-6"), 497413014 (SED-34 6-12"), 497413015 (SED-35 0-6"), 497413017 (SED-36 0-6") and 497413019 (SED-37 0-6") were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	497413									
	001	002	003	004	005	006	007	008	009	010
Nitrogen, Ammonia	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Analyte	497413				
	013	014	015	017	019
Nitrogen, Ammonia	10X	10X	10X	10X	10X

## **Radiochemistry**

**Product:** Alphaspec U, Soil/Veg

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 27

**Analytical Batch:** 1942981

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 23

**Preparation Batch:** 1942654

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
1204441749	Method Blank (MB)
1204441750	497413001(SED-29 0-6) Sample Duplicate (DUP)
1204441751	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Technical Information**

**Recounts**

Sample 497413012 (SED-33 12-16") was recounted due to a peak shift. The recount is reported. Samples 497413005 (SED-30 6-12"), 497413014 (SED-34 6-12") and 497413016 (SED-35 6-12") were given additional clean-up steps and recounted in order to improve the resolution. The recounts are reported. Samples 497413004 (SED-30 0-6") and 497413015 (SED-35 0-6") were recounted due to a peak shift and then given additional clean-up steps and recounted again in order to improve the resolution. The third counts are reported.

**Product: Alphaspec U, Soil/Veg****Analytical Method:** DOE EML HASL-300, U-02-RC Modified**Analytical Procedure:** GL-RAD-A-011 REV# 27**Analytical Batch:** 1942989**Preparation Method:** Dry Soil Prep**Preparation Procedure:** GL-RAD-A-021 REV# 23**Preparation Batch:** 1942870

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413021	SED-37 6-12" DUP
1204441775	Method Blank (MB)
1204441776	497413021(SED-37 6-12" DUP) Sample Duplicate (DUP)
1204441777	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information****Recounts**

Samples 1204441776 (SED-37 6-12" DUPDUP) and 497413021 (SED-37 6-12" DUP) were given additional clean-up steps and recounted in order to improve the resolution. The recounts are reported.

**Product: Dry Weight****Analytical Method:** ASTM D 2216 (Modified)**Analytical Procedure:** GL-OA-E-020 REV# 13**Analytical Batch:** 1942654



**Preparation Method:** Dry Soil Prep  
**Preparation Procedure:** GL-RAD-A-021 REV# 23  
**Preparation Batch:** 1942654

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
1204440926	497413011(SED-33 6-12") Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Dry Weight  
**Analytical Method:** ASTM D 2216 (Modified)  
**Analytical Procedure:** GL-OA-E-020 REV# 13  
**Analytical Batch:** 1942870

**Preparation Method:** Dry Soil Prep  
**Preparation Procedure:** GL-RAD-A-021 REV# 23  
**Preparation Batch:** 1942870

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413021	SED-37 6-12" DUP

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 1943186

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497413001	SED-29 0-6
497413002	SED-29 6-12"
497413003	SED-29 12-16"
497413004	SED-30 0-6"
497413005	SED-30 6-12"
497413006	SED-31 0-6"
497413007	SED-31 6-12"
497413008	SED-32 0-6"
497413009	SED-32 6-12"
497413010	SED-33 0-6"
497413011	SED-33 6-12"
1204442272	Method Blank (MB)
1204442273	497413002(SED-29 6-12") Sample Duplicate (DUP)
1204442274	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 1943187

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497413012	SED-33 12-16"
497413013	SED-34 0-6"
497413014	SED-34 6-12"
497413015	SED-35 0-6"
497413016	SED-35 6-12"
497413017	SED-36 0-6"
497413018	SED-36 6-12"
497413019	SED-37 0-6"
497413020	SED-37 6-12"
497413021	SED-37 6-12" DUP
1204442275	Method Blank (MB)
1204442276	497413012(SED-33 12-16") Sample Duplicate (DUP)
1204442277	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Page: 1 of 3  
 Project # 60595649  
 GEL Quote #:  
 GC Number (1):  
 GEL Work Order Number: 4500778461  
 Client Name: Westinghouse  
 Project/Site Name: WNU00518  
 Address: 5801 Bluff Road, Hopkins, SC 29061  
 Collected By: ~~White Dennis King~~ James Send Results To: joynerdp@westinghouse.com  
 97413  
 \* For composites - indicate start and stop date/time

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 Phone: (843) 556-8171  
 Fax: (843) 766-1178

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military (hhmm) (hhmm))	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)					Comments				
						Radioactive (if Yes, please supply isotopic info.)	(7) Known or possible Hazards		Isotopic U	TAL Metals	Ammonia	Fluoride	Preservative Type (6)					
SED-29 0-6"	11/20/19	14:35	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-29 6-12"	11/20/19	14:40	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-29 12-16"	11/20/19	14:45	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-30 0-6"	11/21/19	09:55	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-30 6-12"	11/21/19	10:00	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-31 0-6"	11/21/19	12:00	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-31 6-12"	11/21/19	12:05	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-32 0-6"	11/21/19	14:00	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-32 6-12"	11/21/19	14:05	G	N	SD	Y	OT	1	X	X	X	X	X					
SED-33 0-6"	11/21/19	15:00	G	N	SD	Y	OT	1	X	X	X	X	X					

**Chain of Custody Signatures**

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<i>James Send</i>	16-22-19	<i>James Send</i>	11-22-19	12:10
<i>James Send</i>	16-22-19	<i>James Send</i>	11-22-19	14:42

Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks:  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: \_\_\_\_\_ °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other

**For sample shipping and delivery details, see Sample Receipt & Review form (SRR).**

1) Chain of Custody Number = Client Determined  
 2) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered  
 4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, N=Nasal  
 5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1)  
 6) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 7) **KNOWN OR POSSIBLE HAZARDS**  
 Characteristic Hazards  
 FL = Flammable/ignitable  
 CO = Corrosive  
 RE = Reactive  
 TSCA Regulated  
 PCB = Polychlorinated biphenyls  
 RCRA Metals  
 As = Arsenic Hg = Mercury  
 Ba = Barium Se = Selenium  
 Cd = Cadmium Ag = Silver  
 Cr = Chromium MR = Misc. RCRA metals  
 Pb = Lead  
 Listed Waste  
 LW = Listed Waste  
 (F, K, P and U-listed wastes.)  
 Waste code(s):  
 Other  
 OT = Other / Unknown  
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  
 Description:  
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

GEL Laboratories, LLC  
2040 Savage Road  
Charleston, SC 29407  
Phone: (843) 556-8171  
Fax: (843) 766-1178

# GEL Chain of Custody and Analytical Request

GEL Work Order Number: \_\_\_\_\_  
Client Name: Westinghouse  
Project/Site Name: WNUC00518  
Address: 5801 Bluff Road Hopkins, SC 29061  
Collected by: James Beeghgart Send Results To: jbeegh@westinghouse.com  
Corey Pugh

Phone #: 803-647-1920  
Fax #: \_\_\_\_\_

Sample ID <i>* For composites - indicate start and stop date/time</i>	Date Collected (mm-dd-yy)	Time Collected (Military) (hhmm)	QC Code (1)	Field Filtered (1)	Sample Matrix (1)	Radonactive	Sample Analysis Requested (5) (Fill in the number of containers for each test)						Comments	
							Should this sample be considered:							
							TC-99	Isotopic	TAL Metals	Ammonia	Fluoride	2		
SED-33* 6-12"	11/21/19	15:05	6	N	SD	Y	X	X	X	X	X	X		Note: extra sample is required for sample specific QC
SED-33 12-16"	11/21/19	16:10	6	N	SD	Y	X	X	X	X	X	X		
SED-34 0-6"	11/21/19	16:10	6	N	SD	Y	X	X	X	X	X	X		
SED-34 6-12"	11/22/19	08:45	6	N	SD	Y	X	X	X	X	X	X		
SED-35 0-6"	11/22/19	08:45	6	N	SD	Y	X	X	X	X	X	X		
SED-35 6-12"	11/22/19	10:05	6	N	SD	Y	X	X	X	X	X	X		
SED-36 0-6"	11/22/19	10:05	6	N	SD	Y	X	X	X	X	X	X		
SED-36 6-12"	11/22/19	10:05	6	N	SD	Y	X	X	X	X	X	X		
SED-37 0-6"	11/22/19	11:20	6	N	SD	Y	X	X	X	X	X	X		
SED-37 6-12"	11/22/19	11:25	6	N	SD	Y	X	X	X	X	X	X		

TAT Requested: Normal. Rush:  Specify:  (Subject to Surcharges) Fax Results: Yes /  No  
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4  
 Sample Collection Time Zone: Eastern Pacific Other \_\_\_\_\_  
 Sample Shipping and Delivery Details

Chain of Custody Signatures		
Relinquished By (Sighted)	Date	Time
<i>[Signature]</i>	11-22-19	12:10
<i>[Signature]</i>	11-22-19	14:42

Received by (signed) \_\_\_\_\_ Date 11-22-19 Time 12:10  
 Method of Shipment: \_\_\_\_\_ Date Shipped: \_\_\_\_\_  
 Airbill #: 1122191442  
 Airbill #: 3

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards  
 Chain of Custody Number = Client Determined  
 1.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 2.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  
 3.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal  
 4.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 5.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, if no preservative is added = leave field blank  
 6.) For Lab Receiving Use Only  
 Custody Seal Intact? YES NO  
 Cooler Temp: \_\_\_\_\_ C  
 WHITE = LABORATORY  
 YELLOW = FILE  
 PINK = CLIENT

# GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

GEL Work Order Number:

Client Name: Westinghouse  
 Phone #: 803-647-1920

Fax #:

Project/Site Name: WNUC00518

Address: 5801 Bluff Road Hopkins, SC 29061

Collected by: James Leaphart  
 Send Results To: jleaphart@westinghouse.com  
 Carey Dusbil

Sample ID

\* For composites - indicate start and stop date/time

SED-37 6-12" DUP

\*Date Collected (mm-dd-yy)  
 11/22/19 11:25

QC Code (b)

G N SD Y

Field Filtered (d)

Sample Matrix (e)

Should this sample be considered:

Radioactive

TSCA Regulated

Sample Analysis Requested (6) (Fill in the number of containers for each test)

Should this sample be considered:	TSCA Regulated	Isotopic U	TAL Metals	Ammonia	Fluoride	Preservative Type (6)
✓		✓	✓	✓	✓	
		✓				2
		✓				X
		✓				X
		✓				X
		✓				X
		✓				X
		✓				X
		✓				X
		✓				X

Comments  
 Note: extra sample is required for sample specific QC

TAT Requested: Normal:  Rush:  Specify:  Fax Results: Yes /  No Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Sample Collection Time Zone: Eastern Pacific Other

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

### Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
<i>[Signature]</i>	11-22-19	1210	<i>[Signature]</i>	11-22-19	1210
<i>[Signature]</i>	11-22-19	1440	<i>[Signature]</i>	11-22-19	1442

### Sample Shipping and Delivery Details

GEL PM: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_  
 Date Shipped: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_

Chain of Custody Number = Client Determined  
 1.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 2.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  
 3.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, WS=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecl, N=Nasal  
 4.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 5.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 6.) For Lab Receiving Use Only  
 Custody Seal Intact? YES / NO  
 Cooler Temp: C

WHITE = LABORATORY  
 YELLOW = FILE  
 PINK = CLIENT

SAMPLE RECEIPT & REVIEW FORM

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>H-T</u>		
Received By: <u>NE</u>		Date Received: <u>11-22-19</u>		
Carrier and Tracking Number		Circle Applicable: FedEx Express   FedEx Ground   UPS   Field Services <u>Courier</u> Other  <u>Drop off</u>		
Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___	
B) Did the client designate the samples are to be received as radioactive?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.	
C) Did the RSO classify the samples as radioactive?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / ml/Hr Classified as: Rad 1   Rad 2   Rad 3	
D) Did the client designate samples are hazardous?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.	
E) Did the RSO identify possible hazards?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's   Flammable   Foreign Soil   RCRA   Asbestos   Beryllium   Other: _____	
Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC   COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs   Dry ice   None   Other: *all temperatures are recorded in Celsius   TEMP: <u>2C</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>12-18</u> Secondary Temperature Device Serial # (If Applicable): _____
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers   No times on containers   COC missing info   Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC   Other (describe)
12 Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished   Other (describe)
Comments (Use Continuation Form if needed):				

PM (or PMA) review: Initials SH Date 11/25/19 Page 1 of 1

**List of current GEL Certifications as of 09 December 2019**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780





December 12, 2019

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: ENV-CONSENTA  
Work Order: 497772

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 27, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

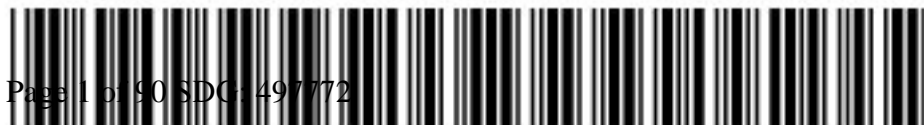
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,

Hope Taylor  
Project Manager

Purchase Order: 4500778461  
Enclosures



**GEL LABORATORIES LLC**

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report  
for**

WNUC009 Westinghouse Electric Co, LLC

Client SDG: 497772 GEL Work Order: 497772

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Hope Taylor.

Reviewed by top a d

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-38 0	Project: WNUC01519
Sample ID: 497772001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 72.2%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		5.17	1.23	3.62	mg/kg	10.1	1	CH5	11/30/19	0242	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	72.9	54.2	163	ug/kg	113	1	MTM1	12/09/19	1045	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		23200000	23700	69600	ug/kg	96.7	1	TXT1	12/09/19	2040	1944141	3
Antimony	U	ND	1150	6960	ug/kg	96.7	1					
Arsenic	J	4300	1740	10400	ug/kg	96.7	1					
Barium		206000	348	1740	ug/kg	96.7	1					
Beryllium		2390	348	1740	ug/kg	96.7	1					
Cadmium	U	ND	348	1740	ug/kg	96.7	1					
Calcium		914000	27800	87000	ug/kg	96.7	1					
Chromium		24900	522	3480	ug/kg	96.7	1					
Cobalt		14300	522	1740	ug/kg	96.7	1					
Copper		22100	1040	6960	ug/kg	96.7	1					
Iron		18400000	27800	87000	ug/kg	96.7	1					
Lead		13600	1150	6960	ug/kg	96.7	1					
Magnesium		2260000	29600	104000	ug/kg	96.7	1					
Manganese		498000	696	3480	ug/kg	96.7	1					
Nickel		13900	522	1740	ug/kg	96.7	1					
Potassium		1210000	22300	87000	ug/kg	96.7	1					
Selenium	U	ND	1740	10400	ug/kg	96.7	1					
Sodium	J	83100	24400	87000	ug/kg	96.7	1					
Vanadium		54300	348	1740	ug/kg	96.7	1					
Zinc		54500	1390	6960	ug/kg	96.7	1					
Silver	U	ND	3480	17400	ug/kg	96.7	10	TXT1	12/10/19	1147	1944141	4
Thallium	U	ND	17400	69600	ug/kg	96.7	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	31.8	6.92	48.4	ug/kg	96.2	2	PRB	12/12/19	0806	1945910	5
Uranium-238		3380	45.7	138	ug/kg	96.2	2					
Uranium-234	U	ND	6.92	34.6	ug/kg	96.2	2	PRB	12/12/19	1026	1945910	6
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-38 0 Project: WNUC01519  
Sample ID: 497772001 Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		576	12.9	35.7	mg/kg	39.7	5	KLP1	12/03/19	1059	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-39 0"-6"	Project: WNUC01519
Sample ID: 497772002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 15:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 42.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		1.90	0.578	1.70	mg/kg	9.85	1	CH5	11/30/19	0411	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	56.8	23.0	69.3	ug/kg	100	1	MTM1	12/09/19	1047	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		30400000	11300	33200	ug/kg	96.2	1	TXT1	12/09/19	2043	1944141	3
Antimony	U	ND	548	3320	ug/kg	96.2	1					
Arsenic	J	4050	830	4980	ug/kg	96.2	1					
Barium		167000	166	830	ug/kg	96.2	1					
Beryllium		3000	166	830	ug/kg	96.2	1					
Cadmium	U	ND	166	830	ug/kg	96.2	1					
Calcium		297000	13300	41500	ug/kg	96.2	1					
Chromium		35400	249	1660	ug/kg	96.2	1					
Cobalt		13000	249	830	ug/kg	96.2	1					
Copper		24600	498	3320	ug/kg	96.2	1					
Iron		19900000	13300	41500	ug/kg	96.2	1					
Lead		21100	548	3320	ug/kg	96.2	1					
Magnesium		3330000	14100	49800	ug/kg	96.2	1					
Manganese		210000	332	1660	ug/kg	96.2	1					
Nickel		16900	249	830	ug/kg	96.2	1					
Potassium		1400000	10600	41500	ug/kg	96.2	1					
Selenium	U	ND	830	4980	ug/kg	96.2	1					
Sodium		59900	11600	41500	ug/kg	96.2	1					
Vanadium		71200	166	830	ug/kg	96.2	1					
Zinc		72100	664	3320	ug/kg	96.2	1					
Silver	U	ND	1660	8300	ug/kg	96.2	10	TXT1	12/10/19	1149	1944141	4
Thallium	U	ND	8300	33200	ug/kg	96.2	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		26.4	3.18	22.3	ug/kg	92.1	2	PRB	12/12/19	0808	1945910	5
Uranium-238		3040	21.0	63.6	ug/kg	92.1	2					
Uranium-234	U	ND	3.18	15.9	ug/kg	92.1	2	PRB	12/12/19	1028	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-39 0"-6"  
Sample ID: 497772002

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		222	6.58	18.3	mg/kg	42.4	5	KLP1	12/03/19	1100	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-40 0"-6"	Project: WNUC01519
Sample ID: 497772003	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 12:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 47.3%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	1.65	0.644	1.89	mg/kg	9.98	1	CH5	11/30/19	0441	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	55.5	28.2	84.7	ug/kg	112	1	MTM1	12/09/19	1048	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		20800000	11800	34800	ug/kg	91.6	1	TXT1	12/09/19	2028	1944141	3
Antimony	U	ND	574	3480	ug/kg	91.6	1					
Arsenic	J	3470	870	5220	ug/kg	91.6	1					
Barium		137000	174	870	ug/kg	91.6	1					
Beryllium		1470	174	870	ug/kg	91.6	1					
Cadmium	U	ND	174	870	ug/kg	91.6	1					
Calcium		429000	13900	43500	ug/kg	91.6	1					
Chromium		26500	261	1740	ug/kg	91.6	1					
Cobalt		10000	261	870	ug/kg	91.6	1					
Copper		19600	522	3480	ug/kg	91.6	1					
Iron		16100000	13900	43500	ug/kg	91.6	1					
Lead		20400	574	3480	ug/kg	91.6	1					
Magnesium		2700000	14800	52200	ug/kg	91.6	1					
Manganese		250000	348	1740	ug/kg	91.6	1					
Nickel		11300	261	870	ug/kg	91.6	1					
Potassium		1420000	11100	43500	ug/kg	91.6	1					
Selenium	U	ND	870	5220	ug/kg	91.6	1					
Sodium		48500	12200	43500	ug/kg	91.6	1					
Vanadium		62700	174	870	ug/kg	91.6	1					
Zinc		49200	696	3480	ug/kg	91.6	1					
Silver	U	ND	1740	8700	ug/kg	91.6	10	TXT1	12/10/19	1133	1944141	4
Thallium	U	ND	8700	34800	ug/kg	91.6	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		28.4	3.47	24.3	ug/kg	91.4	2	PRB	12/12/19	0809	1945910	5
Uranium-238		3020	22.9	69.4	ug/kg	91.4	2					
Uranium-234	U	ND	3.47	17.4	ug/kg	91.4	2	PRB	12/12/19	1030	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-40 0"-6"  
Sample ID: 497772003

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		242	6.78	18.8	mg/kg	39.7	5	KLP1	12/03/19	1101	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-41 0"-6"	Project: WNUC01519
Sample ID: 497772004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 08:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 65.8%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	2.68	0.997	2.93	mg/kg	10.0	1	CH5	11/30/19	0611	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	72.4	40.3	121	ug/kg	103	1	MTM1	12/09/19	1057	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		27100000	19100	56200	ug/kg	96.0	1	TXT1	12/09/19	2046	1944141	3
Antimony	U	ND	927	5620	ug/kg	96.0	1					
Arsenic	J	4250	1400	8430	ug/kg	96.0	1					
Barium		214000	281	1400	ug/kg	96.0	1					
Beryllium		2010	281	1400	ug/kg	96.0	1					
Cadmium	U	ND	281	1400	ug/kg	96.0	1					
Calcium		754000	22500	70200	ug/kg	96.0	1					
Chromium		29400	421	2810	ug/kg	96.0	1					
Cobalt		26700	421	1400	ug/kg	96.0	1					
Copper		25800	843	5620	ug/kg	96.0	1					
Iron		24300000	22500	70200	ug/kg	96.0	1					
Lead		21900	927	5620	ug/kg	96.0	1					
Magnesium		2610000	23900	84300	ug/kg	96.0	1					
Manganese		395000	562	2810	ug/kg	96.0	1					
Nickel		16900	421	1400	ug/kg	96.0	1					
Potassium		1580000	18000	70200	ug/kg	96.0	1					
Selenium	U	ND	1400	8430	ug/kg	96.0	1					
Sodium	J	69000	19700	70200	ug/kg	96.0	1					
Vanadium		85800	281	1400	ug/kg	96.0	1					
Zinc		68900	1120	5620	ug/kg	96.0	1					
Silver	U	ND	2810	14000	ug/kg	96.0	10	TXT1	12/10/19	1152	1944141	4
Thallium	U	ND	14000	56200	ug/kg	96.0	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	17.8	5.38	37.7	ug/kg	91.9	2	PRB	12/12/19	0821	1945910	5
Uranium-238		2390	35.5	108	ug/kg	91.9	2					
Uranium-234	U	ND	5.38	26.9	ug/kg	91.9	2	PRB	12/12/19	1042	1945910	6
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-41 0"-6"  
Sample ID: 497772004

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		466	12.4	34.5	mg/kg	47.2	5	KLP1	12/03/19	1103	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-42 0"-6"	Project:	WNUC01519
Sample ID:	497772005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	25-NOV-19 08:35		
Receive Date:	27-NOV-19		
Collector:	Client		
Moisture:	81.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	5.15	1.80	5.30	mg/kg	9.90	1	CH5	11/30/19	0641	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	119	75.7	228	ug/kg	106	1	MTM1	12/09/19	1102	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		27500000	35100	103000	ug/kg	96.3	1	TXT1	12/09/19	2055	1944141	3
Antimony	U	ND	1700	10300	ug/kg	96.3	1					
Arsenic	J	6150	2580	15500	ug/kg	96.3	1					
Barium		220000	516	2580	ug/kg	96.3	1					
Beryllium	J	1670	516	2580	ug/kg	96.3	1					
Cadmium	U	ND	516	2580	ug/kg	96.3	1					
Calcium		1520000	41200	129000	ug/kg	96.3	1					
Chromium		31400	773	5160	ug/kg	96.3	1					
Cobalt		17800	773	2580	ug/kg	96.3	1					
Copper		30900	1550	10300	ug/kg	96.3	1					
Iron		25100000	41200	129000	ug/kg	96.3	1					
Lead		105000	1700	10300	ug/kg	96.3	1					
Magnesium		1910000	43800	155000	ug/kg	96.3	1					
Manganese		463000	1030	5160	ug/kg	96.3	1					
Nickel		16800	773	2580	ug/kg	96.3	1					
Potassium		1150000	33000	129000	ug/kg	96.3	1					
Selenium	U	ND	2580	15500	ug/kg	96.3	1					
Sodium	J	88600	36100	129000	ug/kg	96.3	1					
Vanadium		95100	516	2580	ug/kg	96.3	1					
Zinc		81000	2060	10300	ug/kg	96.3	1					
Silver	U	ND	5160	25800	ug/kg	96.3	10	TXT1	12/10/19	1202	1944141	4
Thallium	U	ND	25800	103000	ug/kg	96.3	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		156	10.5	73.5	ug/kg	98.0	2	PRB	12/12/19	0823	1945910	5
Uranium-238		7220	69.3	210	ug/kg	98.0	2					
Uranium-234	U	ND	10.5	52.5	ug/kg	98.0	2	PRB	12/12/19	1044	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-42 0"-6"  
Sample ID: 497772005

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		928	15.1	41.8	mg/kg	31.3	5	KLP1	12/03/19	1104	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-43 0"-6" Project: WNUC01519  
Sample ID: 497772006 Client ID: WNUC009  
Matrix: Solid  
Collect Date: 25-NOV-19 12:20  
Receive Date: 27-NOV-19  
Collector: Client  
Moisture: 83.3%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		14.9	1.95	5.73	mg/kg	9.59	1	CH5	11/30/19	0710	1944127	1
Mercury Analysis-CVAA												
7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"												
Mercury	U	ND	90.7	273	ug/kg	114	1	MTM1	12/09/19	1104	1946177	2
Metals Analysis-ICP												
SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"												
Aluminum		15200000	39000	115000	ug/kg	96.0	1	TXT1	12/09/19	2058	1944141	3
Antimony	U	ND	1890	11500	ug/kg	96.0	1					
Arsenic	J	3570	2870	17200	ug/kg	96.0	1					
Barium		105000	574	2870	ug/kg	96.0	1					
Beryllium	J	858	574	2870	ug/kg	96.0	1					
Cadmium	U	ND	574	2870	ug/kg	96.0	1					
Calcium		813000	45900	143000	ug/kg	96.0	1					
Chromium		15600	860	5740	ug/kg	96.0	1					
Cobalt		4780	860	2870	ug/kg	96.0	1					
Copper		16700	1720	11500	ug/kg	96.0	1					
Iron		8080000	45900	143000	ug/kg	96.0	1					
Lead		16000	1890	11500	ug/kg	96.0	1					
Magnesium		1200000	48800	172000	ug/kg	96.0	1					
Manganese		131000	1150	5740	ug/kg	96.0	1					
Nickel		10200	860	2870	ug/kg	96.0	1					
Potassium		684000	36700	143000	ug/kg	96.0	1					
Selenium	U	ND	2870	17200	ug/kg	96.0	1					
Silver	U	ND	574	2870	ug/kg	96.0	1					
Sodium	J	83900	40200	143000	ug/kg	96.0	1					
Thallium	U	ND	2870	11500	ug/kg	96.0	1					
Vanadium		36500	574	2870	ug/kg	96.0	1					
Zinc		53000	2290	11500	ug/kg	96.0	1					
Metals Analysis-ICP-MS												
SW846 3050B/6020B "Dry Weight Corrected"												
Uranium-238		31300	73.7	223	ug/kg	93.5	2	PRB	12/12/19	0825	1945910	4
Uranium-235		862	27.9	196	ug/kg	93.5	5	PRB	12/12/19	0850	1945910	5
Uranium-234	U	ND	11.2	55.9	ug/kg	93.5	2	PRB	12/12/19	1046	1945910	6
Nutrient Analysis												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-43 0"-6"  
Sample ID: 497772006

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		774	18.4	51.2	mg/kg	34.2	5	KLP1	12/03/19	1105	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-44 0"-6"	Project:	WNUC01519
Sample ID:	497772007	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	25-NOV-19 11:50		
Receive Date:	27-NOV-19		
Collector:	Client		
Moisture:	71.8%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	3.04	1.17	3.46	mg/kg	9.76	1	CH5	11/30/19	0740	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	69.9	55.6	167	ug/kg	118	1	MTM1	12/09/19	1105	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		27000000	24000	70600	ug/kg	99.6	1	TXT1	12/09/19	2101	1944141	3
Antimony	U	ND	1160	7060	ug/kg	99.6	1					
Arsenic	J	4380	1760	10600	ug/kg	99.6	1					
Barium		207000	353	1760	ug/kg	99.6	1					
Beryllium		2320	353	1760	ug/kg	99.6	1					
Cadmium	U	ND	353	1760	ug/kg	99.6	1					
Calcium		679000	28200	88200	ug/kg	99.6	1					
Chromium		29500	529	3530	ug/kg	99.6	1					
Cobalt		10200	529	1760	ug/kg	99.6	1					
Copper		21700	1060	7060	ug/kg	99.6	1					
Iron		17100000	28200	88200	ug/kg	99.6	1					
Lead		18800	1160	7060	ug/kg	99.6	1					
Magnesium		2080000	30000	106000	ug/kg	99.6	1					
Manganese		254000	706	3530	ug/kg	99.6	1					
Nickel		17500	529	1760	ug/kg	99.6	1					
Potassium		1230000	22600	88200	ug/kg	99.6	1					
Selenium	U	ND	1760	10600	ug/kg	99.6	1					
Sodium	J	80700	24700	88200	ug/kg	99.6	1					
Vanadium		68800	353	1760	ug/kg	99.6	1					
Zinc		56100	1410	7060	ug/kg	99.6	1					
Silver	U	ND	3530	17600	ug/kg	99.6	10	TXT1	12/10/19	1205	1944141	4
Thallium	U	ND	17600	70600	ug/kg	99.6	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		238	6.50	45.5	ug/kg	91.7	2	PRB	12/12/19	0826	1945910	5
Uranium-238		9690	42.9	130	ug/kg	91.7	2					
Uranium-234	U	ND	6.50	32.5	ug/kg	91.7	2	PRB	12/12/19	1048	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-44 0"-6"  
Sample ID: 497772007

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		389	14.2	39.5	mg/kg	44.6	5	KLP1	12/03/19	1106	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-45 0"-6"	Project: WNUC01519
Sample ID: 497772008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 15:25	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 71.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		7.90	1.19	3.49	mg/kg	9.98	1	CH5	11/30/19	0810	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	107	52.9	159	ug/kg	114	1	MTM1	12/09/19	1107	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		19500000	22100	65000	ug/kg	92.8	1	TXT1	12/09/19	2104	1944141	3
Antimony	U	ND	1070	6500	ug/kg	92.8	1					
Arsenic	J	2380	1620	9740	ug/kg	92.8	1					
Barium		150000	325	1620	ug/kg	92.8	1					
Beryllium	J	1320	325	1620	ug/kg	92.8	1					
Cadmium	U	ND	325	1620	ug/kg	92.8	1					
Calcium		1170000	26000	81200	ug/kg	92.8	1					
Chromium		23600	487	3250	ug/kg	92.8	1					
Cobalt		7420	487	1620	ug/kg	92.8	1					
Copper		18900	974	6500	ug/kg	92.8	1					
Iron		11900000	26000	81200	ug/kg	92.8	1					
Lead		40400	1070	6500	ug/kg	92.8	1					
Magnesium		2030000	27600	97400	ug/kg	92.8	1					
Manganese		224000	650	3250	ug/kg	92.8	1					
Nickel		11800	487	1620	ug/kg	92.8	1					
Potassium		1010000	20800	81200	ug/kg	92.8	1					
Selenium	U	ND	1620	9740	ug/kg	92.8	1					
Sodium		126000	22700	81200	ug/kg	92.8	1					
Vanadium		49900	325	1620	ug/kg	92.8	1					
Zinc		49100	1300	6500	ug/kg	92.8	1					
Silver	U	ND	3250	16200	ug/kg	92.8	10	TXT1	12/10/19	1207	1944141	4
Thallium	U	ND	16200	65000	ug/kg	92.8	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		100	6.91	48.3	ug/kg	98.6	2	PRB	12/12/19	0828	1945910	5
Uranium-238		4920	45.6	138	ug/kg	98.6	2					
Uranium-234	U	ND	6.91	34.5	ug/kg	98.6	2	PRB	12/12/19	1050	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-45 0"-6"  
Sample ID: 497772008

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		586	10.2	28.4	mg/kg	32.5	5	KLP1	12/03/19	1111	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-46 0"-6"	Project: WNUC01519
Sample ID: 497772009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 68.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		3.41	1.02	3.01	mg/kg	9.50	1	CH5	11/30/19	0840	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	U	ND	47.0	141	ug/kg	112	1	MTM1	12/09/19	1109	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		25100000	20700	61000	ug/kg	96.3	1	TXT1	12/09/19	2107	1944141	3
Antimony	U	ND	1010	6100	ug/kg	96.3	1					
Arsenic	J	3990	1530	9150	ug/kg	96.3	1					
Barium		103000	305	1530	ug/kg	96.3	1					
Beryllium	J	1290	305	1530	ug/kg	96.3	1					
Cadmium	U	ND	305	1530	ug/kg	96.3	1					
Calcium		620000	24400	76300	ug/kg	96.3	1					
Chromium		26000	458	3050	ug/kg	96.3	1					
Cobalt		5510	458	1530	ug/kg	96.3	1					
Copper		19600	915	6100	ug/kg	96.3	1					
Iron		12100000	24400	76300	ug/kg	96.3	1					
Lead		33800	1010	6100	ug/kg	96.3	1					
Magnesium		1620000	25900	91500	ug/kg	96.3	1					
Manganese		104000	610	3050	ug/kg	96.3	1					
Nickel		10600	458	1530	ug/kg	96.3	1					
Potassium		946000	19500	76300	ug/kg	96.3	1					
Selenium	U	ND	1530	9150	ug/kg	96.3	1					
Sodium		105000	21400	76300	ug/kg	96.3	1					
Vanadium		68100	305	1530	ug/kg	96.3	1					
Zinc		38600	1220	6100	ug/kg	96.3	1					
Silver	U	ND	3050	15300	ug/kg	96.3	10	TXT1	12/10/19	1210	1944141	4
Thallium	U	ND	15300	61000	ug/kg	96.3	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		48.9	6.11	42.8	ug/kg	96.5	2	PRB	12/12/19	0830	1945910	5
Uranium-238		3190	40.3	122	ug/kg	96.5	2					
Uranium-234	U	ND	6.11	30.6	ug/kg	96.5	2	PRB	12/12/19	1052	1945910	6
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-46 0"-6"  
Sample ID: 497772009

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		371	13.0	36.0	mg/kg	45.5	5	KLP1	12/03/19	1112	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-47 0"-6"	Project: WNUC01519
Sample ID: 497772010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 10:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 77.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		6.02	1.50	4.41	mg/kg	10.1	1	CH5	11/30/19	0910	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	106	58.8	177	ug/kg	101	1	MTM1	12/09/19	1110	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		22000000	29600	87200	ug/kg	99.6	1	TXT1	12/09/19	2110	1944141	3
Antimony	U	ND	1440	8720	ug/kg	99.6	1					
Arsenic	J	4190	2180	13100	ug/kg	99.6	1					
Barium		188000	436	2180	ug/kg	99.6	1					
Beryllium	J	1320	436	2180	ug/kg	99.6	1					
Cadmium	U	ND	436	2180	ug/kg	99.6	1					
Calcium		737000	34900	109000	ug/kg	99.6	1					
Chromium		27000	654	4360	ug/kg	99.6	1					
Cobalt		7780	654	2180	ug/kg	99.6	1					
Copper		22300	1310	8720	ug/kg	99.6	1					
Iron		13200000	34900	109000	ug/kg	99.6	1					
Lead		43100	1440	8720	ug/kg	99.6	1					
Magnesium		1980000	37000	131000	ug/kg	99.6	1					
Manganese		242000	872	4360	ug/kg	99.6	1					
Nickel		12900	654	2180	ug/kg	99.6	1					
Potassium		1080000	27900	109000	ug/kg	99.6	1					
Selenium	U	ND	2180	13100	ug/kg	99.6	1					
Silver	U	ND	436	2180	ug/kg	99.6	1					
Sodium		129000	30500	109000	ug/kg	99.6	1					
Vanadium		50300	436	2180	ug/kg	99.6	1					
Zinc		49600	1740	8720	ug/kg	99.6	1					
Thallium	U	ND	21800	87200	ug/kg	99.6	10	TXT1	12/10/19	1213	1944141	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	44.0	8.19	57.4	ug/kg	93.6	2	PRB	12/12/19	0831	1945910	5
Uranium-238		2560	54.1	164	ug/kg	93.6	2					
Uranium-234	U	ND	8.19	41.0	ug/kg	93.6	2	PRB	12/12/19	1054	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-47 0"-6"  
Sample ID: 497772010

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1540	23.7	65.9	mg/kg	30.1	10	KLP1	12/03/19	1112	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-48 0"-6"	Project: WNUC01519
Sample ID: 497772011	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 11:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 63.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		2.94	0.884	2.60	mg/kg	9.52	1	CH5	11/30/19	0940	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	107	37.4	113	ug/kg	103	1	MTM1	12/09/19	1112	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		26400000	17000	50100	ug/kg	91.7	1	TXT1	12/09/19	2113	1944141	3
Antimony	U	ND	826	5010	ug/kg	91.7	1					
Arsenic	J	3850	1250	7510	ug/kg	91.7	1					
Barium		154000	250	1250	ug/kg	91.7	1					
Beryllium		1350	250	1250	ug/kg	91.7	1					
Cadmium	U	ND	250	1250	ug/kg	91.7	1					
Calcium		408000	20000	62600	ug/kg	91.7	1					
Chromium		26900	376	2500	ug/kg	91.7	1					
Cobalt		7530	376	1250	ug/kg	91.7	1					
Copper		26400	751	5010	ug/kg	91.7	1					
Iron		12400000	20000	62600	ug/kg	91.7	1					
Lead		37400	826	5010	ug/kg	91.7	1					
Magnesium		1670000	21300	75100	ug/kg	91.7	1					
Manganese		249000	501	2500	ug/kg	91.7	1					
Nickel		11600	376	1250	ug/kg	91.7	1					
Potassium		929000	16000	62600	ug/kg	91.7	1					
Selenium	U	ND	1250	7510	ug/kg	91.7	1					
Sodium		93600	17500	62600	ug/kg	91.7	1					
Vanadium		65900	250	1250	ug/kg	91.7	1					
Zinc		46400	1000	5010	ug/kg	91.7	1					
Silver	U	ND	2500	12500	ug/kg	91.7	10	TXT1	12/10/19	1216	1944141	4
Thallium	U	ND	12500	50100	ug/kg	91.7	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		40.3	5.17	36.2	ug/kg	94.7	2	PRB	12/12/19	0833	1945910	5
Uranium-238		3140	34.1	103	ug/kg	94.7	2					
Uranium-234	U	ND	5.17	25.8	ug/kg	94.7	2	PRB	12/12/19	1100	1945910	6
<b>Nutrient Analysis</b>												

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Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-48 0"-6"  
Sample ID: 497772011

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		806	19.2	53.3	mg/kg	39.1	10	KLP1	12/03/19	1113	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-48-DUP 0"-6"  
Sample ID: 497772012  
Matrix: Solid  
Collect Date: 26-NOV-19 11:30  
Receive Date: 27-NOV-19  
Collector: Client  
Moisture: 67.8%

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		3.46	1.05	3.09	mg/kg	9.95	1	CH5	11/30/19	1009	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	118	43.6	131	ug/kg	106	1	MTM1	12/09/19	1114	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		20300000	19300	56800	ug/kg	91.4	1	TXT1	12/09/19	2116	1944141	3
Antimony	U	ND	937	5680	ug/kg	91.4	1					
Arsenic	J	3380	1420	8510	ug/kg	91.4	1					
Barium		146000	284	1420	ug/kg	91.4	1					
Beryllium	J	1190	284	1420	ug/kg	91.4	1					
Cadmium	U	ND	284	1420	ug/kg	91.4	1					
Calcium		435000	22700	70900	ug/kg	91.4	1					
Chromium		23000	426	2840	ug/kg	91.4	1					
Cobalt		6390	426	1420	ug/kg	91.4	1					
Copper		26100	851	5680	ug/kg	91.4	1					
Iron		9320000	22700	70900	ug/kg	91.4	1					
Lead		80000	937	5680	ug/kg	91.4	1					
Magnesium		1250000	24100	85100	ug/kg	91.4	1					
Manganese		286000	568	2840	ug/kg	91.4	1					
Nickel		9870	426	1420	ug/kg	91.4	1					
Potassium		708000	18200	70900	ug/kg	91.4	1					
Selenium	U	ND	1420	8510	ug/kg	91.4	1					
Silver	U	ND	284	1420	ug/kg	91.4	1					
Sodium		112000	19900	70900	ug/kg	91.4	1					
Vanadium		57700	284	1420	ug/kg	91.4	1					
Zinc		42100	1140	5680	ug/kg	91.4	1					
Thallium	U	ND	14200	56800	ug/kg	91.4	10	TXT1	12/10/19	1218	1944141	4
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	37.4	5.91	41.4	ug/kg	95.2	2	PRB	12/12/19	0838	1945910	5
Uranium-238		2650	39.0	118	ug/kg	95.2	2					
Uranium-234	U	ND	5.91	29.6	ug/kg	95.2	2	PRB	12/12/19	1102	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-48-DUP 0"-6"  
Sample ID: 497772012

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1080	29.7	82.6	mg/kg	53.2	10	KLP1	12/03/19	1114	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-49 0"-6"	Project:	WNUC01519
Sample ID:	497772013	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	26-NOV-19 13:00		
Receive Date:	27-NOV-19		
Collector:	Client		
Moisture:	73.9%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		5.44	1.23	3.62	mg/kg	9.48	1	CH5	11/30/19	1039	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	87.2	53.9	162	ug/kg	106	1	MTM1	12/09/19	1115	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		14300000	25900	76200	ug/kg	99.6	1	TXT1	12/09/19	2119	1944141	3
Antimony	U	ND	1260	7620	ug/kg	99.6	1					
Arsenic	J	2120	1900	11400	ug/kg	99.6	1					
Barium		69200	381	1900	ug/kg	99.6	1					
Beryllium	J	727	381	1900	ug/kg	99.6	1					
Cadmium	U	ND	381	1900	ug/kg	99.6	1					
Calcium		258000	30500	95200	ug/kg	99.6	1					
Chromium		13900	571	3810	ug/kg	99.6	1					
Cobalt		3570	571	1900	ug/kg	99.6	1					
Copper		11300	1140	7620	ug/kg	99.6	1					
Iron		6750000	30500	95200	ug/kg	99.6	1					
Lead		11500	1260	7620	ug/kg	99.6	1					
Magnesium		1040000	32400	114000	ug/kg	99.6	1					
Manganese		75900	762	3810	ug/kg	99.6	1					
Nickel		6890	571	1900	ug/kg	99.6	1					
Potassium		621000	24400	95200	ug/kg	99.6	1					
Selenium	U	ND	1900	11400	ug/kg	99.6	1					
Silver	U	ND	381	1900	ug/kg	99.6	1					
Sodium	J	78400	26700	95200	ug/kg	99.6	1					
Thallium	U	ND	1900	7620	ug/kg	99.6	1					
Vanadium		32400	381	1900	ug/kg	99.6	1					
Zinc		27000	1520	7620	ug/kg	99.6	1					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		81.9	7.44	52.1	ug/kg	97.3	2	PRB	12/12/19	0840	1945910	4
Uranium-238		4840	49.1	149	ug/kg	97.3	2					
Uranium-234	U	ND	7.44	37.2	ug/kg	97.3	2	PRB	12/12/19	1104	1945910	5
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-49 0"-6"  
Sample ID: 497772013

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		209	2.53	7.03	mg/kg	36.8	1	KLP1	12/03/19	1051	1943957	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6020B	
5	SW846 3050B/6020B	
6	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-50 0"-6"	Project: WNUC01519
Sample ID: 497772014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 14:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 69.5%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		4.67	1.09	3.22	mg/kg	9.80	1	CH5	11/30/19	1209	1944127	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	108	52.2	157	ug/kg	120	1	MTM1	12/09/19	1117	1946177	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		22500000	22200	65200	ug/kg	99.4	1	TXT1	12/09/19	2121	1944141	3
Antimony	U	ND	1080	6520	ug/kg	99.4	1					
Arsenic	J	3640	1630	9780	ug/kg	99.4	1					
Barium		178000	326	1630	ug/kg	99.4	1					
Beryllium	J	1620	326	1630	ug/kg	99.4	1					
Cadmium	U	ND	326	1630	ug/kg	99.4	1					
Calcium		1120000	26100	81500	ug/kg	99.4	1					
Chromium		25700	489	3260	ug/kg	99.4	1					
Cobalt		10500	489	1630	ug/kg	99.4	1					
Copper		25800	978	6520	ug/kg	99.4	1					
Iron		15300000	26100	81500	ug/kg	99.4	1					
Lead		32100	1080	6520	ug/kg	99.4	1					
Magnesium		2440000	27700	97800	ug/kg	99.4	1					
Manganese		368000	652	3260	ug/kg	99.4	1					
Nickel		13800	489	1630	ug/kg	99.4	1					
Potassium		1060000	20900	81500	ug/kg	99.4	1					
Selenium	U	ND	1630	9780	ug/kg	99.4	1					
Sodium	J	71500	22800	81500	ug/kg	99.4	1					
Vanadium		62100	326	1630	ug/kg	99.4	1					
Zinc		67300	1300	6520	ug/kg	99.4	1					
Silver	U	ND	3260	16300	ug/kg	99.4	10	TXT1	12/10/19	1221	1944141	4
Thallium	U	ND	16300	65200	ug/kg	99.4	10					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		72.1	6.27	43.9	ug/kg	95.6	2	PRB	12/12/19	0842	1945910	5
Uranium-238		4470	41.4	125	ug/kg	95.6	2					
Uranium-234	U	ND	6.27	31.4	ug/kg	95.6	2	PRB	12/12/19	1106	1945910	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-50 0"-6"  
Sample ID: 497772014

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		750	12.7	35.4	mg/kg	43.1	5	KLP1	12/03/19	1115	1943957	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/02/19	1615	1943956
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945906
SW846 3050B	SW846 3050B Prep	DS1	11/30/19	1455	1944140
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/06/19	1530	1946176
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	11/29/19	1706	1944124

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6020B	
6	SW846 3050B/6020B	
7	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01-112219	Project: WNUC01519
Sample ID: 497772015	Client ID: WNUC009
Matrix: Water	
Collect Date: 22-NOV-19 13:20	
Receive Date: 27-NOV-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "As Received"</b>												
Fluoride	U	ND	0.033	0.100	mg/L		1	JLD1	11/27/19	2226	1943917	1
<b>Mercury Analysis-CVAA</b>												
<b>7470 Cold Vapor Mercury, Liquid "As Received"</b>												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	CW2	12/06/19	1036	1945742	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3005A/6010D Metals Scan Liquid "As Received"</b>												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	JWJ	12/04/19	2018	1943988	3
Antimony	J	5.26	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	U	ND	3.30	20.0	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1	JWJ	12/05/19	1257	1943988	4
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3010A/6020B "As Received"</b>												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	12/11/19	1353	1945540	5
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	12/11/19	1513	1945540	6
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01-112219  
Sample ID: 497772015

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia	U	ND	0.017	0.050	mg/L	1.00	1	KLP1	12/03/19	1024	1943955	7

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	12/02/19	1615	1943954
SW846 3005A	SW846 3005A for 6010D	HH1	12/02/19	1800	1943987
SW846 3010A	SW 846 3010 Acid Digestion	HH1	12/05/19	1615	1945539
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	12/05/19	1424	1945741

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3005A/6010D	
5	SW846 3010A/6020B	
6	SW846 3010A/6020B	
7	EPA 350.1	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-38 0	Project: WNUC01519
Sample ID: 497772001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 72.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		3.26	+/-0.426	0.116	0.500	pCi/g			EXC2	12/05/19	0625	1944518	1
Uranium-235/236		0.204	+/-0.126	0.0978	0.500	pCi/g							
Uranium-238		1.68	+/-0.306	0.0873	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	16.5	+/-16.8	28.2	50.0	pCi/g			JJ3	12/08/19	0537	1944223	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-39 0"-6"	Project: WNUC01519
Sample ID: 497772002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 22-NOV-19 15:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 42.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.86	+/-0.308	0.103	0.500	pCi/g			EXC2	12/05/19	0625	1944518	1
Uranium-235/236	U	0.0122	+/-0.0458	0.077	0.500	pCi/g							
Uranium-238		1.70	+/-0.293	0.0623	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-7.74	+/-14.5	25.8	50.0	pCi/g		JJ3	12/08/19	0553	1944223		2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			91.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.1	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-40 0"-6"      Project: WNUC01519  
Sample ID: 497772003      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 22-NOV-19 12:20  
Receive Date: 27-NOV-19  
Collector: Client  
Moisture: 47.3%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		1.90	+/-0.273	0.0756	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.131	+/-0.0851	0.0689	0.500	pCi/g							
Uranium-238		1.24	+/-0.222	0.078	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.48	+/-15.4	26.9	50.0	pCi/g			JJ3	12/08/19	0610	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			102	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-41 0"-6"	Project: WNUC01519
Sample ID: 497772004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 08:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 65.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.72	+/-0.277	0.0914	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236	U	0.0394	+/-0.0638	0.0987	0.500	pCi/g							
Uranium-238		1.41	+/-0.249	0.0341	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.995	+/-15.1	26.2	50.0	pCi/g			JJ3	12/08/19	0626	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			94.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-42 0"-6"	Project: WNUC01519
Sample ID: 497772005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 08:35	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 81.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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### Rad Alpha Spec Analysis

#### Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		6.12	+/-0.550	0.105	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.285	+/-0.135	0.0474	0.500	pCi/g							
Uranium-238		2.23	+/-0.333	0.0708	0.500	pCi/g							

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	5.94	+/-12.3	21.1	50.0	pCi/g			JJ3	12/08/19	0643	1944223	2
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#### The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

#### Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-43 0"-6"	Project: WNUC01519
Sample ID: 497772006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 12:20	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 83.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		47.5	+/-1.61	0.115	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		2.32	+/-0.398	0.097	0.500	pCi/g							
Uranium-238		12.1	+/-0.813	0.0865	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	-3.67	+/-12.3	21.7	50.0	pCi/g			JJ3	12/08/19	0700	1944223	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			75.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-44 0"-6"      Project: WNUC01519  
Sample ID: 497772007      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 25-NOV-19 11:50  
Receive Date: 27-NOV-19  
Collector: Client  
Moisture: 71.8%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		8.86	+/-0.648	0.0891	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.377	+/-0.152	0.073	0.500	pCi/g							
Uranium-238		2.62	+/-0.353	0.0682	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	6.23	+/-12.9	22.0	50.0	pCi/g			JJ3	12/08/19	0716	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			97.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-45 0"-6"	Project: WNUC01519
Sample ID: 497772008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 15:25	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 71.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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### Rad Alpha Spec Analysis

#### Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		5.86	+/-0.543	0.120	0.500	pCi/g			EXC2	12/05/19	0702	1944518	1
Uranium-235/236		0.268	+/-0.134	0.0768	0.500	pCi/g							
Uranium-238		2.20	+/-0.333	0.0854	0.500	pCi/g							

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	2.83	+/-11.3	19.5	50.0	pCi/g			JJ3	12/08/19	0733	1944223	2
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#### The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

#### Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-46 0"-6"	Project: WNUC01519
Sample ID: 497772009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 25-NOV-19 14:50	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 68.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		4.02	+/-0.496	0.158	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236		0.179	+/-0.127	0.118	0.500	pCi/g							
Uranium-238		2.15	+/-0.363	0.126	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-2.62	+/-11.0	19.4	50.0	pCi/g			JJ3	12/08/19	0749	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			89.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			99	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-47 0"-6"	Project: WNUC01519
Sample ID: 497772010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 10:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 77.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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### Rad Alpha Spec Analysis

#### Alphaspec U, Soil/Veg "Dry Weight Corrected"

Uranium-233/234		3.18	+/-0.441	0.147	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236		0.232	+/-0.143	0.127	0.500	pCi/g							
Uranium-238		1.46	+/-0.302	0.140	0.500	pCi/g							

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-3.87	+/-13.9	24.4	50.0	pCi/g			JJ3	12/08/19	0806	1944223	2
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#### The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

#### The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			101	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

#### Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-48 0"-6"	Project: WNUC01519
Sample ID: 497772011	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 11:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 63.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.57	+/-0.445	0.154	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236	U	0.091	+/-0.107	0.116	0.500	pCi/g							
Uranium-238		1.98	+/-0.392	0.152	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-8.79	+/-17.5	31.0	50.0	pCi/g			JJ3	12/08/19	0823	1944223	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			84.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			103	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-48-DUP 0"-6"	Project: WNUC01519
Sample ID: 497772012	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 11:30	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 67.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.43	+/-0.383	0.132	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236	U	0.0144	+/-0.054	0.0908	0.500	pCi/g							
Uranium-238		1.62	+/-0.311	0.0849	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-8.16	+/-13.7	24.5	50.0	pCi/g		JJ3	12/08/19	0839	1944223		2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			98.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			103	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-49 0"-6"	Project: WNUC01519
Sample ID: 497772013	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 13:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 73.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		4.59	+/-0.557	0.126	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236		0.215	+/-0.140	0.0646	0.500	pCi/g							
Uranium-238		2.11	+/-0.377	0.0522	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	-5.34	+/-14.4	25.4	50.0	pCi/g			JJ3	12/08/19	0856	1944223	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			81.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-50 0"-6"	Project: WNUC01519
Sample ID: 497772014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 26-NOV-19 14:00	
Receive Date: 27-NOV-19	
Collector: Client	
Moisture: 69.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		3.64	+/-0.486	0.115	0.500	pCi/g			EXC2	12/05/19	0921	1944518	1
Uranium-235/236	U	0.104	+/-0.109	0.136	0.500	pCi/g							
Uranium-238		1.86	+/-0.349	0.110	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.910	+/-15.0	26.1	50.0	pCi/g			JJ3	12/08/19	0912	1944223	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/02/19	1341	1944026

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			87.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 12, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01-112219      Project: WNUC01519  
Sample ID: 497772015      Client ID: WNUC009  
Matrix: Water  
Collect Date: 22-NOV-19 13:20  
Receive Date: 27-NOV-19  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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### Rad Alpha Spec Analysis

#### Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent		EXC2	12/03/19	1208	1944519	1	
Uranium-233/234	U	-0.0603	+/-0.125	0.304	0.500	pCi/L							
Uranium-235/236	U	-0.000315	+/-0.103	0.222	0.500	pCi/L							
Uranium-238	U	-0.0648	+/-0.118	0.295	0.500	pCi/L							

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	-17.4	+/-25.4	45.4	50.0	pCi/L		JJ3	12/08/19	0756	1944224	2
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			68.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			106	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: December 12, 2019

Page 1 of 21

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497772

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	1943917										
QC1204443887	497428002	DUP									
Fluoride		0.368		0.360	mg/L	2.06 ^		(+/-0.100)	JLD1	11/28/19	00:56
QC1204443886	LCS										
Fluoride	2.50			2.47	mg/L		98.6	(90%-110%)		11/28/19	00:26
QC1204443885	MB										
Fluoride			U	ND	mg/L					11/27/19	23:56
QC1204443888	497428002	PS									
Fluoride	2.50	0.368		2.92	mg/L		102	(90%-110%)		11/28/19	01:26
Batch	1944127										
QC1204444269	497413020	DUP									
Fluoride		1.60		1.91	mg/kg	18 ^		(+/-1.54)	CH5	11/30/19	01:42
QC1204444270	497772001	DUP									
Fluoride		5.17		5.25	mg/kg	1.41 ^		(+/-3.64)		11/30/19	03:12
QC1204444268	LCS										
Fluoride	24.6			24.7	mg/kg		100	(90%-110%)		11/30/19	00:43
QC1204444267	MB										
Fluoride			U	ND	mg/kg					11/30/19	00:13
QC1204444271	497413020	MS									
Fluoride	37.9	1.60		15.5	mg/kg		36.7 *	(75%-125%)		11/30/19	02:12
QC1204444272	497772001	MS									
Fluoride	90.0	5.17		45.9	mg/kg		45.3 *	(75%-125%)		11/30/19	03:42



# GEL LABORATORIES LLC

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## QC Summary

Workorder: 497772

Page 2 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis - ICPMS</b>											
Batch	1945540										
QC1204447630		LCS									
Uranium-235	0.360			0.370	ug/L		103	(80%-120%)	PRB	12/11/19	13:50
Uranium-238	49.6			50.9	ug/L		103	(80%-120%)			
QC1204447651		LCS									
Uranium-234	0.550			0.611	ug/L		111	(80%-120%)		12/11/19	15:09
QC1204447631		LCSD									
Uranium-235	0.360			0.386	ug/L	4.02	107	(0%-20%)		12/11/19	13:52
Uranium-238	49.6			52.8	ug/L	3.63	106	(0%-20%)			
QC1204447652		LCSD									
Uranium-234	0.550			0.587	ug/L	4.01	107	(0%-20%)		12/11/19	15:11
QC1204447629		MB									
Uranium-234			U	ND	ug/L					12/11/19	15:07
Uranium-235			U	ND	ug/L					12/11/19	13:48
Uranium-238			U	ND	ug/L						
QC1204447632		497772015	SDILT								
Uranium-234	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/11/19	15:15
Uranium-235	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/11/19	13:55
Uranium-238	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Batch	1945910										
QC1204448520		LCS									
Uranium-235	34.2			32.3	ug/kg		94.5	(80%-120%)	PRB	12/12/19	08:04

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 497772

Page 3 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis - ICPMS</b>											
Batch	1945910										
Uranium-238	4720			4580	ug/kg		97	(80%-120%)	PRB	12/12/19	08:04
QC1204448521	LCS										
Uranium-234	52.9			54.0	ug/kg		102	(80%-120%)		12/12/19	10:24
QC1204448519	MB										
Uranium-234			U	ND	ug/kg					12/12/19	10:22
Uranium-235			U	ND	ug/kg					12/12/19	08:02
Uranium-238			U	ND	ug/kg						
QC1204448522	497772003 MS										
Uranium-235	68.0	28.4		111	ug/kg		122	(75%-125%)		12/12/19	08:11
Uranium-238	9370	3020		12800	ug/kg		105	(75%-125%)			
QC1204448523	497772003 MS										
Uranium-234	97.4	U	ND	119	ug/kg		121	(75%-125%)		12/12/19	10:32
QC1204448524	497772014 MS										
Uranium-235	111	72.1		166	ug/kg		84.7	(75%-125%)		12/12/19	08:44
Uranium-238	15200	4470		18500	ug/kg		91.9	(75%-125%)			
QC1204448525	497772014 MS										
Uranium-234	177	U	ND	184	ug/kg		104	(75%-125%)		12/12/19	11:08
QC1204448526	497772003 MSD										
Uranium-235	65.5	28.4		90.8	ug/kg	20.4*	95.3	(0%-20%)		12/12/19	08:13
Uranium-238	9030	3020		11600	ug/kg	10.3	94.6	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 4 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis - ICPMS</b>											
Batch	1945910										
QC1204448527	497772003	MSD									
Uranium-234	98.7	U	ND	115	ug/kg	3.27	116	(0%-20%)	PRB	12/12/19	10:34
QC1204448528	497772014	MSD									
Uranium-235	112		72.1	187	ug/kg	12	103	(0%-20%)		12/12/19	08:45
Uranium-238	15500		4470	19600	ug/kg	5.56	97.6	(0%-20%)			
QC1204448529	497772014	MSD									
Uranium-234	166	U	ND	190	ug/kg	3.06	114	(0%-20%)		12/12/19	11:10
QC1204448530	497772003	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/12/19	10:36
Uranium-235			0.0817	J	0.0148	ug/L	9.42	(0%-20%)		12/12/19	08:16
Uranium-238			8.69		1.54	ug/L	11.2	(0%-20%)			
QC1204448531	497772014	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/12/19	11:12
Uranium-235			0.115	J	0.0209	ug/L	9.05	(0%-20%)		12/12/19	08:49
Uranium-238			7.13		1.33	ug/L	6.99	(0%-20%)			
<b>Metals Analysis-ICP</b>											
Batch	1943988										
QC1204444022	LCS										
Aluminum	5000			4770	ug/L		95.3	(80%-120%)	JWJ	12/04/19	20:13
Antimony	500			533	ug/L		107	(80%-120%)			
Arsenic	500			491	ug/L		98.2	(80%-120%)			

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 497772

Page 5 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1943988										
Barium	500			492	ug/L		98.4	(80%-120%)	JWJ	12/04/19	20:13
Beryllium	500			503	ug/L		101	(80%-120%)			
Cadmium	500			486	ug/L		97.2	(80%-120%)			
Calcium	5000			4960	ug/L		99.2	(80%-120%)			
Chromium	500			491	ug/L		98.2	(80%-120%)			
Cobalt	500			527	ug/L		105	(80%-120%)			
Copper	500			487	ug/L		97.4	(80%-120%)			
Iron	5000			5020	ug/L		100	(80%-120%)			
Lead	500			489	ug/L		97.8	(80%-120%)			
Magnesium	5000			5000	ug/L		100	(80%-120%)			
Manganese	500			469	ug/L		93.8	(80%-120%)			
Nickel	500			489	ug/L		97.7	(80%-120%)			
Potassium	5000			5290	ug/L		106	(80%-120%)		12/05/19	12:52
Selenium	500			497	ug/L		99.4	(80%-120%)			
Silver	100			97.2	ug/L		97.2	(80%-120%)		12/04/19	20:13

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## QC Summary

Workorder: 497772

Page 6 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1943988										
Sodium	5000			4690	ug/L		93.8	(80%-120%)	JWJ	12/04/19	20:13
Thallium	500			472	ug/L		94.3	(80%-120%)			
Vanadium	500			489	ug/L		97.8	(80%-120%)			
Zinc	500			473	ug/L		94.5	(80%-120%)			
QC1204444023	LCSD										
Aluminum	5000			4820	ug/L	1.14	96.4	(0%-20%)		12/04/19	20:15
Antimony	500			532	ug/L	0.242	106	(0%-20%)			
Arsenic	500			487	ug/L	0.755	97.4	(0%-20%)			
Barium	500			496	ug/L	0.872	99.2	(0%-20%)			
Beryllium	500			507	ug/L	0.816	101	(0%-20%)			
Cadmium	500			484	ug/L	0.313	96.9	(0%-20%)			
Calcium	5000			4930	ug/L	0.68	98.5	(0%-20%)			
Chromium	500			483	ug/L	1.69	96.5	(0%-20%)			
Cobalt	500			524	ug/L	0.693	105	(0%-20%)			
Copper	500			486	ug/L	0.335	97.1	(0%-20%)			
Iron	5000			5010	ug/L	0.108	100	(0%-20%)			

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## QC Summary

Workorder: 497772

Page 7 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1943988										
Lead	500			491	ug/L	0.416	98.2	(0%-20%)	JWJ	12/04/19	20:15
Magnesium	5000			5020	ug/L	0.487	100	(0%-20%)			
Manganese	500			468	ug/L	0.271	93.5	(0%-20%)			
Nickel	500			488	ug/L	0.158	97.6	(0%-20%)			
Potassium	5000			5360	ug/L	1.24	107	(0%-20%)		12/05/19	12:54
Selenium	500			493	ug/L	0.81	98.6	(0%-20%)			
Silver	100			97.2	ug/L	0.0072	97.2	(0%-20%)		12/04/19	20:15
Sodium	5000			4820	ug/L	2.61	96.3	(0%-20%)			
Thallium	500			498	ug/L	5.41	99.6	(0%-20%)			
Vanadium	500			486	ug/L	0.56	97.2	(0%-20%)			
Zinc	500			471	ug/L	0.258	94.3	(0%-20%)			
QC1204444021	MB										
Aluminum			U	ND	ug/L					12/04/19	20:09
Antimony			J	9.71	ug/L						
Arsenic			U	ND	ug/L						
Barium			U	ND	ug/L						

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## QC Summary

Workorder: 497772

Page 8 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1943988										
Beryllium			U	ND	ug/L				JWJ	12/04/19	20:09
Cadmium			U	ND	ug/L						
Calcium			U	ND	ug/L						
Chromium				5.35	ug/L						
Cobalt			U	ND	ug/L						
Copper			U	ND	ug/L						
Iron			U	ND	ug/L						
Lead			U	ND	ug/L						
Magnesium			U	ND	ug/L						
Manganese			U	ND	ug/L						
Nickel			J	2.29	ug/L						
Potassium			U	ND	ug/L					12/05/19	12:48
Selenium			U	ND	ug/L						
Silver			U	ND	ug/L					12/04/19	20:09
Sodium			U	ND	ug/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 9 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1943988										
Thallium			U	ND	ug/L				JWJ	12/04/19	20:09
Vanadium			U	ND	ug/L						
Zinc			U	ND	ug/L						
QC1204444024 497772015 SDILT											
Aluminum	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/04/19	20:22
Antimony	J	5.26	U	ND	ug/L	N/A		(0%-20%)			
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Barium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Copper	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 10 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1943988										
Magnesium	U	ND	U	ND	ug/L	N/A		(0%-20%)	JWJ	12/04/19	20:22
Manganese	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Nickel	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/05/19	13:00
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/04/19	20:22
Sodium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Zinc	U	ND	U	ND	ug/L	N/A		(0%-20%)			

Batch 1944141  
QC1204444293 LCS

Aluminum	461000			448000	ug/kg		97.1	(80%-120%)	TXT1	12/09/19	20:25
Antimony	46100			43800	ug/kg		95	(80%-120%)			
Arsenic	46100			42000	ug/kg		91.1	(80%-120%)			
Barium	46100			44400	ug/kg		96.3	(80%-120%)			
Beryllium	46100			45000	ug/kg		97.6	(80%-120%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 11 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Cadmium	46100			44100	ug/kg		95.6	(80%-120%)	TXT1	12/09/19	20:25
Calcium	461000			450000	ug/kg		97.5	(80%-120%)			
Chromium	46100			44100	ug/kg		95.6	(80%-120%)			
Cobalt	46100			44600	ug/kg		96.8	(80%-120%)			
Copper	46100			45500	ug/kg		98.6	(80%-120%)			
Iron	461000			442000	ug/kg		95.7	(80%-120%)			
Lead	46100			44400	ug/kg		96.2	(80%-120%)			
Magnesium	461000			445000	ug/kg		96.5	(80%-120%)			
Manganese	46100			44100	ug/kg		95.6	(80%-120%)			
Nickel	46100			44400	ug/kg		96.2	(80%-120%)			
Potassium	461000			444000	ug/kg		96.3	(80%-120%)			
Selenium	46100			42700	ug/kg		92.6	(80%-120%)			
Silver	9230			8800	ug/kg		95.4	(80%-120%)			
Sodium	461000			434000	ug/kg		94.1	(80%-120%)			
Thallium	46100			44800	ug/kg		97	(80%-120%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 12 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Vanadium	46100			44600	ug/kg		96.8	(80%-120%)	TXT1	12/09/19	20:25
Zinc	46100			43500	ug/kg		94.2	(80%-120%)			
QC1204444292	MB										
Aluminum			U	ND	ug/kg					12/09/19	20:21
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						
Calcium			U	ND	ug/kg						
Chromium			U	ND	ug/kg						
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Iron			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 13 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Manganese			U	ND	ug/kg				TXT1	12/09/19	20:21
Nickel			U	ND	ug/kg						
Potassium			U	ND	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg						
Sodium			U	ND	ug/kg						
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1204444294 497772003 MS											
Aluminum	896000	20800000		32600000	ug/kg		N/A	(75%-125%)		12/09/19	20:31
Antimony	89600	U	ND	69400	ug/kg		77.5	(75%-125%)			
Arsenic	89600	J	3470	75100	ug/kg		79.9	(75%-125%)			
Barium	89600		137000	225000	ug/kg		99.2	(75%-125%)			
Beryllium	89600		1470	83400	ug/kg		91.4	(75%-125%)			
Cadmium	89600	U	ND	78300	ug/kg		87.4	(75%-125%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 14 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Calcium	896000	429000		1370000	ug/kg		105	(75%-125%)	TXT1	12/09/19	20:31
Chromium	89600	26500		107000	ug/kg		89.5	(75%-125%)			
Cobalt	89600	10000		90700	ug/kg		90.1	(75%-125%)			
Copper	89600	19600		107000	ug/kg		98	(75%-125%)			
Iron	896000	16100000		16100000	ug/kg		N/A	(75%-125%)			
Lead	89600	20400		102000	ug/kg		90.6	(75%-125%)			
Magnesium	896000	2700000		3480000	ug/kg		86.8	(75%-125%)			
Manganese	89600	250000		352000	ug/kg		114	(75%-125%)			
Nickel	89600	11300		94900	ug/kg		93.3	(75%-125%)			
Potassium	896000	1420000		2250000	ug/kg		92.9	(75%-125%)			
Selenium	89600	U	ND	73800	ug/kg		81.9	(75%-125%)			
Silver	17900	U	ND	16400	ug/kg		91.6	(75%-125%)		12/10/19	11:35
Sodium	896000	48500		860000	ug/kg		90.6	(75%-125%)		12/09/19	20:31
Thallium	89600	U	ND	74900	ug/kg		83.6	(75%-125%)		12/10/19	11:35
Vanadium	89600	62700		137000	ug/kg		82.6	(75%-125%)		12/09/19	20:31

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 15 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Zinc	89600	49200		135000	ug/kg		95.6	(75%-125%)	TXT1	12/09/19	20:31
QC1204444295 497772003 MSD											
Aluminum	878000	20800000		16800000	ug/kg	63.8*	N/A	(0%-20%)		12/09/19	20:33
Antimony	87800	U	ND	69800	ug/kg	0.597	79.6	(0%-20%)			
Arsenic	87800	J	3470	76000	ug/kg	1.18	82.6	(0%-20%)			
Barium	87800		137000	201000	ug/kg	11.3	73.9*	(0%-20%)			
Beryllium	87800		1470	82600	ug/kg	0.886	92.5	(0%-20%)			
Cadmium	87800	U	ND	78100	ug/kg	0.217	89	(0%-20%)			
Calcium	878000		429000	1180000	ug/kg	14.8	85.8	(0%-20%)			
Chromium	87800		26500	99800	ug/kg	6.68	83.5	(0%-20%)			
Cobalt	87800		10000	89100	ug/kg	1.85	90.1	(0%-20%)			
Copper	87800		19600	101000	ug/kg	6.06	92.9	(0%-20%)			
Iron	878000		16100000	16100000	ug/kg	0.446	N/A	(0%-20%)			
Lead	87800		20400	98900	ug/kg	2.72	89.4	(0%-20%)			
Magnesium	878000		2700000	3400000	ug/kg	2.11	80.3	(0%-20%)			
Manganese	87800		250000	325000	ug/kg	7.97	85.6	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 16 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Nickel	87800	11300		88800	ug/kg	6.66	88.3	(0%-20%)	TXT1	12/09/19	20:33
Potassium	878000	1420000		2210000	ug/kg	1.96	89.8	(0%-20%)			
Selenium	87800	U	ND	75700	ug/kg	2.45	85.7	(0%-20%)			
Silver	17600	U	ND	15400	ug/kg	6.25	87.8	(0%-20%)		12/10/19	11:38
Sodium	878000	48500		839000	ug/kg	2.5	90.1	(0%-20%)		12/09/19	20:33
Thallium	87800	U	ND	74900	ug/kg	0.098	85.4	(0%-20%)		12/10/19	11:38
Vanadium	87800	62700		137000	ug/kg	0.137	84.2	(0%-20%)		12/09/19	20:33
Zinc	87800	49200		123000	ug/kg	9.39	83.8	(0%-20%)			
QC1204451583 497772003 PS											
Barium	500	785		1220	ug/L		87.2	(75%-125%)		12/09/19	20:35
QC1204444296 497772003 SDILT											
Aluminum		120000		25500	ug/L	6.47		(0%-20%)		12/09/19	20:37
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		J	20.0	J	5.43	ug/L	36	(0%-20%)			
Barium			785		168	ug/L	6.77	(0%-20%)			
Beryllium			8.44	J	1.73	ug/L	2.35	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 17 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Calcium		2460		526	ug/L	6.69		(0%-20%)	TXT1	12/09/19	20:37
Chromium		152		32.3	ug/L	6.21		(0%-20%)			
Cobalt		57.5		12.5	ug/L	8.99		(0%-20%)			
Copper		113		23.7	ug/L	4.85		(0%-20%)			
Iron		92800		20000	ug/L	7.53		(0%-20%)			
Lead		117		25.4	ug/L	8.04		(0%-20%)			
Magnesium		15500		3320	ug/L	6.92		(0%-20%)			
Manganese		1440		308	ug/L	7.1		(0%-20%)			
Nickel		65.1		14.2	ug/L	9.45		(0%-20%)			
Potassium		8150		1740	ug/L	6.9		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/10/19	11:44
Sodium		279	U	ND	ug/L	N/A		(0%-20%)		12/09/19	20:37
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/10/19	11:44
Vanadium		361		75.5	ug/L	4.68		(0%-20%)		12/09/19	20:37



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 18 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1944141										
Zinc		283		61.6	ug/L	8.83		(0%-20%)	TXT1	12/09/19	20:37
<b>Metals Analysis-Mercury</b>											
Batch	1945742										
QC1204448131	496108001	DUP									
Mercury	U	ND	U	ND	ug/L	N/A			CW2	12/06/19	09:56
QC1204448127	LCS										
Mercury	2.00			2.03	ug/L		102	(80%-120%)		12/06/19	09:53
QC1204448126	MB										
Mercury			U	ND	ug/L					12/06/19	09:51
QC1204448132	496108001	MS									
Mercury	2.00	U	ND	1.94	ug/L		97.1	(75%-125%)		12/06/19	09:58
QC1204448133	496108001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		12/06/19	09:59
Batch	1946177										
QC1204449153	497772003	DUP									
Mercury	J	55.5	J	58.4	ug/kg	5.09	^	(+/-80.8)	MTM1	12/09/19	10:50
QC1204449157	497772014	DUP									
Mercury	J	108	J	101	ug/kg	6.4	^	(+/-156)		12/09/19	11:22
QC1204449152	LCS										
Mercury	224			210	ug/kg		93.7	(80%-120%)		12/09/19	10:43
QC1204449151	MB										
Mercury			U	ND	ug/kg					12/09/19	10:42

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 19 of 21

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-Mercury</b>											
Batch 1946177											
QC1204449154	497772003	MS									
Mercury	427	J	55.5	463	ug/kg		95.5	(80%-120%)	MTM1	12/09/19	10:52
QC1204449158	497772014	MS									
Mercury	708	J	108	719	ug/kg		86.4	(80%-120%)		12/09/19	11:24
QC1204449155	497772003	SDILT									
Mercury		J	0.262	U	ND	ug/L	N/A	(0%-10%)		12/09/19	10:53
QC1204449159	497772014	SDILT									
Mercury		J	0.275	U	ND	ug/L	N/A	(0%-10%)		12/09/19	11:25
<b>Nutrient Analysis</b>											
Batch 1943955											
QC1204443947	497694001	DUP									
Nitrogen, Ammonia			0.079	0.0888	mg/L	11.7	^	(+/-0.025)	KLP1	12/03/19	10:22
QC1204443945	LCS										
Nitrogen, Ammonia	1.00			0.989	mg/L		98.9	(90%-110%)		12/03/19	10:08
QC1204443944	MB										
Nitrogen, Ammonia			U	ND	mg/L					12/03/19	10:07
QC1204443949	497694001	MS									
Nitrogen, Ammonia	1.00		0.079	1.12	mg/L		104	(90%-110%)		12/03/19	10:23
Batch 1943957											
QC1204443952	497772003	DUP									
Nitrogen, Ammonia			242	295	mg/kg	19.7		(0%-20%)	KLP1	12/03/19	11:01
QC1204443953	497772014	DUP									
Nitrogen, Ammonia			750	885	mg/kg	16.6		(0%-20%)		12/03/19	11:16

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2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 497772

Page 20 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Nutrient Analysis</b>											
Batch	1943957										
QC1204443951		LCS									
Nitrogen, Ammonia	50.0			51.0	mg/kg		102	(90%-110%)	KLP1	12/03/19	10:33
QC1204443950		MB									
Nitrogen, Ammonia			U	ND	mg/kg					12/03/19	10:32
QC1204443954		497772003	MS								
Nitrogen, Ammonia	66.9		242	395	mg/kg		228*	(90%-110%)		12/03/19	11:02
QC1204443955		497772014	MS								
Nitrogen, Ammonia	117		750	949	mg/kg		N/A	(90%-110%)		12/03/19	11:17

**Notes:**

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E %difference of sample and SD is >10%. Sample concentration must meet flagging criteria
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FB Mercury was found present at quantifiable concentrations in field blanks received with these samples. Data associated with the blank are deemed invalid for reporting to regulatory agencies
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N Metals--The Matrix spike sample recovery is not within specified control limits
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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## QC Summary

Workorder: 497772

Page 21 of 21

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Y											
Z											
^											
d											
e											
h											

Y Other specific qualifiers were required to properly define the results. Consult case narrative.

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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## QC Summary

Report Date: December 12, 2019

Page 1 of 4

Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 497772

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1944518										
QC1204445235	497772003 DUP										
Uranium-233/234		1.90		2.11	pCi/g	10.6		(0%-20%)	EXC2	12/05/19	09:21
	Uncertainty	+/-0.273		+/-0.357							
Uranium-235/236		0.131		0.181	pCi/g	32.2		(0% - 100%)			
	Uncertainty	+/-0.0851		+/-0.125							
Uranium-238		1.24		1.47	pCi/g	17.2		(0%-20%)			
	Uncertainty	+/-0.222		+/-0.299							
QC1204445236	497772014 DUP										
Uranium-233/234		3.64		3.29	pCi/g	10.2		(0%-20%)		12/05/19	13:10
	Uncertainty	+/-0.486		+/-0.445							
Uranium-235/236	U	0.104		0.248	pCi/g	58.2		(0% - 100%)			
	Uncertainty	+/-0.109		+/-0.140							
Uranium-238		1.86		1.69	pCi/g	9.65		(0%-20%)			
	Uncertainty	+/-0.349		+/-0.319							
QC1204445237	LCS										
Uranium-233/234				4.74	pCi/g					12/05/19	13:10
	Uncertainty			+/-0.547							
Uranium-235/236				0.197	pCi/g						
	Uncertainty			+/-0.132							
Uranium-238		5.13		5.44	pCi/g		106	(75%-125%)			
	Uncertainty			+/-0.587							
QC1204445234	MB										
Uranium-233/234			U	0.0698	pCi/g					12/06/19	08:57
	Uncertainty			+/-0.0749							
Uranium-235/236			U	0.0312	pCi/g						
	Uncertainty			+/-0.0613							
Uranium-238			U	0.0361	pCi/g						
	Uncertainty			+/-0.0574							

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## QC Summary

Workorder: 497772

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1944519										
QC1204445242	LCS			0.640	percent				EXC2	12/03/19	12:08
Pct Uranium-235											
Uranium-233/234				13.6	pCi/L						
	Uncertainty			+/-1.03							
Uranium-235/236				0.605	pCi/L						
	Uncertainty			+/-0.249							
Uranium-238	13.6			14.6	pCi/L		107	(75%-125%)			
	Uncertainty			+/-1.06							
QC1204445243	LCSD			0.673	percent	4.93				12/03/19	12:08
Pct Uranium-235											
Uranium-233/234				13.9	pCi/L	1.74					
	Uncertainty			+/-1.03							
Uranium-235/236				0.640	pCi/L	5.67					
	Uncertainty			+/-0.252							
Uranium-238	13.6			14.7	pCi/L	0.661	108	(0%-20%)			
	Uncertainty			+/-1.06							
QC1204445241	MB			0.00	percent					12/03/19	12:08
Pct Uranium-235			U								
Uranium-233/234			U	-0.046	pCi/L						
	Uncertainty			+/-0.0963							
Uranium-235/236			U	0.0141	pCi/L						
	Uncertainty			+/-0.0886							
Uranium-238			U	-0.0354	pCi/L						
	Uncertainty			+/-0.102							
<b>Rad Liquid Scintillation</b>											
Batch	1944223										
QC1204444524	497772014		DUP								
Technetium-99	U	0.910	U	-4.2	pCi/g	N/A			N/A	JJ3	12/08/19 09:45
	Uncertainty	+/-15.0		+/-17.6							

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## QC Summary

Workorder: 497772

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1944223										
QC1204444525	497772003	DUP									
Technetium-99	U	-0.48	U	0.661	pCi/g	N/A		N/A	JJ3	12/08/19	10:02
	Uncertainty	+/-15.4		+/-16.7							
QC1204444526	LCS										
Technetium-99	319			273	pCi/g		85.6	(75%-125%)		12/08/19	10:19
	Uncertainty			+/-18.7							
QC1204444523	MB										
Technetium-99			U	-7.54	pCi/g					12/08/19	09:29
	Uncertainty			+/-11.1							
Batch	1944224										
QC1204444531	LCS										
Technetium-99	854			748	pCi/L		87.6	(75%-125%)	JJ3	12/08/19	08:30
	Uncertainty			+/-47.8							
QC1204444532	LCSD										
Technetium-99	854			724	pCi/L	3.33	84.7	(0%-20%)		12/08/19	08:46
	Uncertainty			+/-47.4							
QC1204444530	MB										
Technetium-99			U	-11	pCi/L					12/08/19	08:13
	Uncertainty			+/-25.6							

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.

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## QC Summary

Workorder: 497772

Page 4 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
UI	Gamma Spectroscopy--Uncertain identification										
UJ	Gamma Spectroscopy--Uncertain identification										
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Y	Other specific qualifiers were required to properly define the results. Consult case narrative.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.



**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 497772**

**Metals**

**Product:** Determination of Metals by ICP

**Analytical Method:** SW846 3005A/6010D

**Analytical Procedure:** GL-MA-E-013 REV# 31

**Analytical Batch:** 1943988

**Preparation Method:** SW846 3005A

**Preparation Procedure:** GL-MA-E-006 REV# 14

**Preparation Batch:** 1943987

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772015	EB-01-112219
1204444021	Method Blank (MB)ICP
1204444022	Laboratory Control Sample (LCS)
1204444023	Laboratory Control Sample Duplicate (LCSD)
1204444024	497772015(EB-01-112219L) Serial Dilution (SD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Method Blank (MB) Statement**

The samples in this SDG did not contain the above noted analytes at concentrations higher than the RDL, therefore the data was not adversely affected.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204444021 (MB)	Chromium	5.35 * 10 > .116

**Laboratory Control Sample Duplicate (LCSD)**

An LCSD was used in place of matrix QC due to the designation of field QC.

**Product:** Determination of Metals by ICP

**Analytical Method:** SW846 3050B/6010D

**Analytical Procedure:** GL-MA-E-013 REV# 31

**Analytical Batch:** 1944141

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1944140

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444292	Method Blank (MB)ICP
1204444293	Laboratory Control Sample (LCS)
1204444296	497772003(SED-40 0"-6"L) Serial Dilution (SD)
1204444294	497772003(SED-40 0"-6"S) Matrix Spike (MS)
1204444295	497772003(SED-40 0"-6"SD) Matrix Spike Duplicate (MSD)
1204451583	497772003(SED-40 0"-6"PS) Post Spike (PS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS/MSD) Recovery Statement**

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204444295 (SED-40 0"-6"MSD)	Barium	73.9* (75%-125%)

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204444294MS and 1204444295MSD (SED-40 0"-6")	Aluminum	RPD 63.8* (0%-20%)

**Technical Information**

**Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples required dilutions in order to minimize suppression of silver and thallium, due to matrix interferences. 497772001 (SED-38 0), 497772002 (SED-39 0"-6"), 497772003 (SED-40 0"-6"), 497772004 (SED-41 0"-6"), 497772005 (SED-42 0"-6"), 497772007 (SED-44 0"-6"), 497772008 (SED-45 0"-6"), 497772009 (SED-46 0"-6"), 497772011 (SED-48 0"-6") and 497772014 (SED-50 0"-6"). Samples required dilutions in order to minimize suppression of thallium, due to matrix interferences. 497772010 (SED-47 0"-6") and 497772012 (SED-48-DUP 0"-6").

Analyte	497772									
	001	002	003	004	005	007	008	009	010	011
Silver	10X	10X	10X	10X	10X	10X	10X	10X	1X	10X
Thallium	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Analyte	497772	
	012	014
Silver	1X	10X
Thallium	10X	10X

**Product: Determination of Metals by ICP-MS**

**Analytical Method:** SW846 3010A/6020B

**Analytical Procedure:** GL-MA-E-014 REV# 33

**Analytical Batch:** 1945540

**Preparation Method:** SW846 3010A

**Preparation Procedure:** GL-MA-E-008 REV# 19

**Preparation Batch:** 1945539

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772015	EB-01-112219
1204447629	Method Blank (MB)ICP-MS
1204447630	Laboratory Control Sample (LCS)
1204447651	Laboratory Control Sample (LCS)
1204447631	Laboratory Control Sample Duplicate (LCSD)
1204447652	Laboratory Control Sample Duplicate (LCSD)
1204447632	497772015(EB-01-112219L) Serial Dilution (SD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Calibration Information**

**ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

**Quality Control (QC) Information**

**Laboratory Control Sample Duplicate (LCSD)**

An LCSD was used in place of matrix QC due to the designation of field QC.

**Product: Determination of Metals by ICP-MS**

**Analytical Method:** SW846 3050B/6020B

**Analytical Procedure:** GL-MA-E-014 REV# 33

**Analytical Batch:** 1945910

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1945906

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204448519	Method Blank (MB)ICP-MS
1204448520	Laboratory Control Sample (LCS)
1204448521	Laboratory Control Sample (LCS)
1204448530	497772003(SED-40 0"-6"L) Serial Dilution (SD)
1204448531	497772014(SED-50 0"-6"L) Serial Dilution (SD)
1204448522	497772003(SED-40 0"-6"S) Matrix Spike (MS)
1204448523	497772003(SED-40 0"-6"S) Matrix Spike (MS)

1204448524	497772014(SED-50 0"-6"S) Matrix Spike (MS)
1204448525	497772014(SED-50 0"-6"S) Matrix Spike (MS)
1204448526	497772003(SED-40 0"-6"SD) Matrix Spike Duplicate (MSD)
1204448527	497772003(SED-40 0"-6"SD) Matrix Spike Duplicate (MSD)
1204448528	497772014(SED-50 0"-6"SD) Matrix Spike Duplicate (MSD)
1204448529	497772014(SED-50 0"-6"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Calibration Information**

**ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

**Quality Control (QC) Information**

**MS/MSD Relative Percent Difference (RPD) Statement**

The RPD values between qualifying analyte results in the MS and MSD were not within the acceptance limits. Sample non-homogeneity and/or possible matrix interferences may be suspected.

Sample	Analyte	Value
1204448522MS and 1204448526MSD (SED-40 0"-6")	Uranium-235	RPD 20.4* (0%-20%)

**Technical Information**

**Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Sample 497772006 (SED-43 0"-6") was diluted to ensure that the analyte concentration was within the linear calibration range of the instrument. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	497772									
	001	002	003	004	005	006	007	008	009	010
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	5X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	497772			
	011	012	013	014
Uranium-234	2X	2X	2X	2X

Uranium-235	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 38

**Analytical Batch:** 1945742

**Preparation Method:** SW846 7470A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 38

**Preparation Batch:** 1945741

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772015	EB-01-112219
1204448126	Method Blank (MB)CVAA
1204448127	Laboratory Control Sample (LCS)
1204448133	496108001(NonSDGL) Serial Dilution (SD)
1204448131	496108001(NonSDGD) Sample Duplicate (DUP)
1204448132	496108001(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer

**Analytical Method:** SW846 7471A

**Analytical Procedure:** GL-MA-E-010 REV# 38

**Analytical Batch:** 1946177

**Preparation Method:** SW846 7471A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 38

**Preparation Batch:** 1946176

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"

497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204449151	Method Blank (MB)CVAA
1204449152	Laboratory Control Sample (LCS)
1204449155	497772003(SED-40 0"-6"L) Serial Dilution (SD)
1204449159	497772014(SED-50 0"-6"L) Serial Dilution (SD)
1204449153	497772003(SED-40 0"-6"D) Sample Duplicate (DUP)
1204449157	497772014(SED-50 0"-6"D) Sample Duplicate (DUP)
1204449154	497772003(SED-40 0"-6"S) Matrix Spike (MS)
1204449158	497772014(SED-50 0"-6"S) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**General Chemistry**

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batch:** 1943917

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772015	EB-01-112219
1204443885	Method Blank (MB)
1204443886	Laboratory Control Sample (LCS)
1204443887	497428002(NonSDG) Sample Duplicate (DUP)
1204443888	497428002(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Sample Dilutions**

The following samples 1204443887 (Non SDG 497428002DUP) and 1204443888 (Non SDG 497428002PS) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations

into the linear calibration range.

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batches:** 1944127 and 1944124

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444267	Method Blank (MB)
1204444268	Laboratory Control Sample (LCS)
1204444269	497413020(SED-37 6-12") Sample Duplicate (DUP)
1204444270	497772001(SED-38 0) Sample Duplicate (DUP)
1204444271	497413020(SED-37 6-12") Matrix Spike (MS)
1204444272	497772001(SED-38 0) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

<b>Analyte</b>	<b>Sample</b>	<b>Value</b>
Fluoride	1204444271 (SED-37 6-12"MS)	36.7* (75%-125%)
	1204444272 (SED-38 0MS)	45.3* (75%-125%)

**Miscellaneous Information**



**Manual Integrations**

Sample 1204444268 (LCS) was manually integrated to correctly position the baseline as set in the calibration standards.

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1

**Preparation Procedure:** GL-GC-E-106 REV# 10

**Preparation Batch:** 1943955

**Preparation Method:** EPA 350.1 Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 1943954

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772015	EB-01-112219
1204443944	Method Blank (MB)
1204443945	Laboratory Control Sample (LCS)
1204443947	497694001(NonSDG) Sample Duplicate (DUP)
1204443949	497694001(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1 Modified

**Preparation Procedure:** GL-GC-E-106 REV# 10

**Preparation Batch:** 1943957

**Preparation Method:** EPA 350.2 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 1943956

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"

497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204443950	Method Blank (MB)
1204443951	Laboratory Control Sample (LCS)
1204443952	497772003(SED-40 0"-6") Sample Duplicate (DUP)
1204443953	497772014(SED-50 0"-6") Sample Duplicate (DUP)
1204443954	497772003(SED-40 0"-6") Matrix Spike (MS)
1204443955	497772014(SED-50 0"-6") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Nitrogen, Ammonia	1204443954 (SED-40 0"-6"MS)	228* (90%-110%)

**Technical Information**

**Sample Dilutions**

The following samples 1204443952 (SED-40 0"-6"DUP), 1204443953 (SED-50 0"-6"DUP), 1204443954 (SED-40 0"-6"MS), 1204443955 (SED-50 0"-6"MS), 497772001 (SED-38 0), 497772002 (SED-39 0"-6"), 497772003 (SED-40 0"-6"), 497772004 (SED-41 0"-6"), 497772005 (SED-42 0"-6"), 497772006 (SED-43 0"-6"), 497772007 (SED-44 0"-6"), 497772008 (SED-45 0"-6"), 497772009 (SED-46 0"-6"), 497772010 (SED-47 0"-6"), 497772011 (SED-48 0"-6"), 497772012 (SED-48-DUP 0"-6") and 497772014 (SED-50 0"-6") were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	497772									
	001	002	003	004	005	006	007	008	009	010
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	10X

Analyte	497772		
	011	012	014
Nitrogen, Ammonia	10X	10X	5X

## **Radiochemistry**

**Product:** Alphaspec U, Soil/Veg

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 27

**Analytical Batch:** 1944518

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 23

**Preparation Batch:** 1944026

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204445234	Method Blank (MB)
1204445235	497772003(SED-40 0"-6") Sample Duplicate (DUP)
1204445236	497772014(SED-50 0"-6") Sample Duplicate (DUP)
1204445237	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Technical Information**

#### **Recounts**

Sample 1204445234 (MB) was recounted due to a peak shift. The recount is reported.

**Product: Alphaspec U, Liquid**

**Analytical Method: DOE EML HASL-300, U-02-RC Modified**

**Analytical Procedure: GL-RAD-A-011 REV# 27**

**Analytical Batch: 1944519**

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772015	EB-01-112219
1204445241	Method Blank (MB)
1204445242	Laboratory Control Sample (LCS)
1204445243	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Dry Weight**

**Analytical Method: ASTM D 2216 (Modified)**

**Analytical Procedure: GL-OA-E-020 REV# 13**

**Analytical Batch: 1944026**

**Preparation Method: Dry Soil Prep**

**Preparation Procedure: GL-RAD-A-021 REV# 23**

**Preparation Batch: 1944026**

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444081	497772001(SED-38 0) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 1944223

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
497772001	SED-38 0
497772002	SED-39 0"-6"
497772003	SED-40 0"-6"
497772004	SED-41 0"-6"
497772005	SED-42 0"-6"
497772006	SED-43 0"-6"
497772007	SED-44 0"-6"
497772008	SED-45 0"-6"
497772009	SED-46 0"-6"
497772010	SED-47 0"-6"
497772011	SED-48 0"-6"
497772012	SED-48-DUP 0"-6"
497772013	SED-49 0"-6"
497772014	SED-50 0"-6"
1204444523	Method Blank (MB)
1204444524	497772014(SED-50 0"-6") Sample Duplicate (DUP)
1204444525	497772003(SED-40 0"-6") Sample Duplicate (DUP)
1204444526	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Liquid**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 1944224

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
497772015	EB-01-112219
1204444530	Method Blank (MB)
1204444531	Laboratory Control Sample (LCS)
1204444532	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Page: 1 of 2  
 Project #: 60595649.9  
 GEL Quote #:  
 COC Number (1):  
 PO Number:  
**GEL Chain of Custody and Analytical Request**  
 GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178  
 GEL Work Order Number: 497772

Client Name: WESTINGHOUSE  
 Phone #: 803 647 1920  
 Project/Site Name: RI IMPLEMENTATION  
 Fax #:  
 Address: 5801 BUCK RD HOPKINS SC 29061  
 Collected by: JAMES LEAPHARE  
 Send Results To: DAMA JOYNER

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	TSCA Regulated	Should this sample be considered:	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)	Preservative Type (6)	Comments
SED-38 0-6"	11-22-19	1450	N	NO	SD	NO		1	TAL METALS		Note: extra sample is required for sample specific QC
SED-39 0-6"		1520	N		SD			1	AMMOXIA		
SED-40 0-6"		1220	N		SD			1	TAL METALS		
SED-40-MS 0-6"		1220	MS		SD			1	AMMOXIA		
SED-40-MSD 0-6"		1220	MSD		SD			1	TAL METALS		
SED-41 0-6"	11-25-19	0830	N		SD			1	TAL METALS		
SED-42 0-6"		0835	N		SD			1	TAL METALS		
SED-43 0-6"		1220	P		SD			1	TAL METALS		
SED-44 0-6"		1150	N		SD			1	TAL METALS		
SED-45 0-6"		1525	N		SD			1	TAL METALS		

TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ Fax Results: Yes / No  
 (Subject to Surcharges)  
 Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards  
 NO

Chain of Custody Signatures		
Relinquished By (Signed)	Date	Time
J. Leaphare	11-27-19	0713
M. ...	11-27-19	1015
M. ...	11-27-19	1510

Sample Shipping and Delivery Details  
 Sample Collection Time Zone: \_\_\_\_\_  
 Eastern \_\_\_\_\_ Pacific \_\_\_\_\_  
 Central \_\_\_\_\_ Other \_\_\_\_\_  
 Date Shipped: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 For Lab Receiving Use Only  
 Custody Seal Intact? YES NO  
 Cooler Temp: 1 C

WHITE = LABORATORY  
 YELLOW = FILE  
 PINK = CLIENT

# GEL Chain of Custody and Analytical Request

Page: 2 of 2  
 Project #: 60595649.9  
 GEL Quote #:  
 GOC Number (1):  
 GBO Number:

GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

GEL Work Order Number:

Client Name: WESTINGHOUSE  
 Project/Site Name: RI IMPLEMENTATION  
 Address: 5801 BLUFF RD HOPKINS SC 29061  
 Collected by: JAMES LEAPHART  
 Send Results To: DIANA JOYWEZ

Phone #: 803 647 1920  
 Fax #:  
 Sample Analysis Requested <sup>(5)</sup> (Fill in the number of containers for each test)  
 Sample ID: SED-46, SED-47, SED-48, SED-48-Dup, SED-49, SED-50, SED-50-MS, SED-50-MSD, EB-01-112219

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Sample Analysis Requested <sup>(5)</sup>								Total number of containers	Should this sample be considered:			Comments	
															TSCA Regulated	Radioactive	Preservative Type (6)		
						TA-C METALS	AMMONIA	FLUORIDE	ISOTOPIC URANIUM	ISOTOPIC THORIUM	TAL METALS	AMMONIA	FLUORIDE						ISOTOPIC URANIUM
SED-46	11-25-19	1450	N	NO	SD	X	X	X	X	X	X	X	X	X		NS	NS		Note: extra sample is required for sample specific QC
SED-47	11-26-19	1000	N		SD	X	X	X	X	X	X	X	X	X					
SED-48		1130	N		SD	X	X	X	X	X	X	X	X	X					
SED-48-Dup		1130	FD		SD	X	X	X	X	X	X	X	X	X					
SED-49		1300	N		SD	X	X	X	X	X	X	X	X	X					
SED-50		1400	N		SD	X	X	X	X	X	X	X	X	X					
SED-50-MS		1400	MS		SD	X	X	X	X	X	X	X	X	X					
SED-50-MSD		1400	MSD		SD	X	X	X	X	X	X	X	X	X					
EB-01-112219	11-22-19	1320	EB	✓	W										3				

TAT Requested: Normal  Rush:  Specify:  (Subject to Surcharges) Fax Results: Yes / No  
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4  
 Sample Collection Time Zone: Eastern / Pacific / Other \_\_\_\_\_  
 Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards. NO

Chain of Custody Signatures  
 Relinquished/By (Signed) Date Time Received by (signed) Date Time  
 1. J Leaphart 11-27-19 0713 SECURE LOCATION 11-27-19 0713  
 2. [Signature] 11-27-19 1045 [Signature] 11-27-19 15:10  
 3. [Signature] 11-27-19 1450 [Signature]

Method of Shipment:  Express /  Ground /  Other \_\_\_\_\_  
 Date Shipped: \_\_\_\_\_  
 GEL PM: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 For Lab Receiving Use Only  
 Custody Seal Intact? YES / NO  
 Cooler Temp: \_\_\_\_\_ / \_\_\_\_\_

Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Soil, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Feecal, N=Nasal  
 Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, AA = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 Chain of Custody Number = Client determined  
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Soil, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Feecal, N=Nasal  
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, AA = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 WHITE = LABORATORY  
 YELLOW = FILE  
 PINK = CLIENT

Page 2 of 2





**List of current GEL Certifications as of 12 December 2019**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



December 11, 2019

Ms. Cynthia Logsdon  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: ENV-CONSENTA  
Work Order: 498097

Dear Ms. Logsdon:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 04, 2019. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

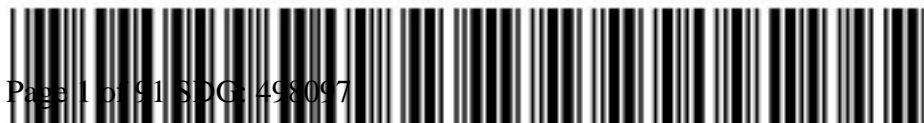
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4778.

Sincerely,

Katelyn Gray for  
Hope Taylor  
Project Manager

Purchase Order: 4500778461  
Enclosures



**GEL LABORATORIES LLC**

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report  
for**

WNUC009 Westinghouse Electric Co, LLC

Client SDG: 498097 GEL Work Order: 498097

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Hope Taylor.



Reviewed by \_\_\_\_\_

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-51 6"-12"	Project: WNUC01519
Sample ID: 498097001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 10:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 66%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride		2.96	0.995	2.93	mg/kg	9.95	1	LXA2	12/06/19	0149	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	U	ND	43.3	130	ug/kg	111	1	CW2	12/06/19	1035	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		19900000	19200	56600	ug/kg	96.2	1	TXT1	12/06/19	1708	1945551	3
Antimony	U	ND	933	5660	ug/kg	96.2	1					
Arsenic	J	3300	1410	8480	ug/kg	96.2	1					
Barium		191000	283	1410	ug/kg	96.2	1					
Beryllium		1930	283	1410	ug/kg	96.2	1					
Cadmium	U	ND	283	1410	ug/kg	96.2	1					
Chromium		26100	424	2830	ug/kg	96.2	1					
Cobalt		11500	424	1410	ug/kg	96.2	1					
Copper		20800	848	5660	ug/kg	96.2	1					
Iron		16100000	22600	70700	ug/kg	96.2	1					
Lead		17000	933	5660	ug/kg	96.2	1					
Magnesium		2810000	24000	84800	ug/kg	96.2	1					
Manganese		261000	566	2830	ug/kg	96.2	1					
Nickel		12000	424	1410	ug/kg	96.2	1					
Potassium		1560000	18100	70700	ug/kg	96.2	1					
Selenium	U	ND	1410	8480	ug/kg	96.2	1					
Vanadium		64800	283	1410	ug/kg	96.2	1					
Zinc		55700	1130	5660	ug/kg	96.2	1					
Silver	U	ND	2830	14100	ug/kg	96.2	10	TXT1	12/06/19	1711	1945551	4
Thallium	U	ND	14100	56600	ug/kg	96.2	10					
Calcium		304000	22600	70700	ug/kg	96.2	1	TXT1	12/09/19	1203	1945551	5
Sodium		82400	20100	71800	ug/kg	97.7	1	LS	12/10/19	1409	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	20.6	5.78	40.4	ug/kg	98.2	2	PRB	12/11/19	1407	1945538	7
Uranium-238		2450	38.1	116	ug/kg	98.2	2					
Uranium-234	U	ND	5.78	28.9	ug/kg	98.2	2	PRB	12/11/19	1529	1945538	8
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-51 6"-12"  
Sample ID: 498097001

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		401	10.0	27.9	mg/kg	37.9	5	KLP1	12/10/19	1053	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-51 0"-6"	Project: WNUC01519
Sample ID: 498097002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 10:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 69.6%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	2.77	1.11	3.27	mg/kg	9.95	1	LXA2	12/06/19	0423	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	U	ND	49.3	148	ug/kg	113	1	CW2	12/06/19	1036	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		20300000	19700	58000	ug/kg	88.3	1	TXT1	12/06/19	1713	1945551	3
Antimony	U	ND	957	5800	ug/kg	88.3	1					
Arsenic	J	2250	1450	8700	ug/kg	88.3	1					
Barium		98000	290	1450	ug/kg	88.3	1					
Beryllium	J	1170	290	1450	ug/kg	88.3	1					
Cadmium	U	ND	290	1450	ug/kg	88.3	1					
Chromium		25100	435	2900	ug/kg	88.3	1					
Cobalt		5300	435	1450	ug/kg	88.3	1					
Copper		19000	870	5800	ug/kg	88.3	1					
Iron		9550000	23200	72500	ug/kg	88.3	1					
Lead		24200	957	5800	ug/kg	88.3	1					
Magnesium		1940000	24700	87000	ug/kg	88.3	1					
Manganese		128000	580	2900	ug/kg	88.3	1					
Nickel		9140	435	1450	ug/kg	88.3	1					
Potassium		1120000	18600	72500	ug/kg	88.3	1					
Selenium	J	2000	1450	8700	ug/kg	88.3	1					
Silver	U	ND	290	1450	ug/kg	88.3	1					
Vanadium		54300	290	1450	ug/kg	88.3	1					
Zinc		34700	1160	5800	ug/kg	88.3	1					
Thallium	U	ND	14500	58000	ug/kg	88.3	10	TXT1	12/06/19	1716	1945551	4
Calcium		335000	23200	72500	ug/kg	88.3	1	TXT1	12/09/19	1206	1945551	5
Sodium		91100	21600	77000	ug/kg	93.8	1	LS	12/10/19	1411	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	28.2	6.24	43.7	ug/kg	95.1	2	PRB	12/11/19	1409	1945538	7
Uranium-238		2610	41.2	125	ug/kg	95.1	2					
Uranium-234	U	ND	6.24	31.2	ug/kg	95.1	2	PRB	12/11/19	1531	1945538	8
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-51 0"-6"  
Sample ID: 498097002

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		692	13.4	37.3	mg/kg	45.5	5	KLP1	12/10/19	1054	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-52 0"-6"	Project: WNUC01519
Sample ID: 498097003	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 11:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 56.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	1.48	0.823	2.42	mg/kg	10.4	1	LXA2	12/06/19	0454	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	57.1	31.9	95.9	ug/kg	103	1	CW2	12/06/19	1038	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		24300000	15600	45800	ug/kg	98.8	1	TXT1	12/06/19	1719	1945551	3
Antimony	U	ND	756	4580	ug/kg	98.8	1					
Arsenic	J	4400	1150	6870	ug/kg	98.8	1					
Barium		144000	229	1150	ug/kg	98.8	1					
Beryllium		1600	229	1150	ug/kg	98.8	1					
Cadmium	U	ND	229	1150	ug/kg	98.8	1					
Chromium		29700	344	2290	ug/kg	98.8	1					
Cobalt		7140	344	1150	ug/kg	98.8	1					
Copper		20000	687	4580	ug/kg	98.8	1					
Iron		17000000	18300	57300	ug/kg	98.8	1					
Lead		23900	756	4580	ug/kg	98.8	1					
Magnesium		2700000	19500	68700	ug/kg	98.8	1					
Manganese		156000	458	2290	ug/kg	98.8	1					
Nickel		11900	344	1150	ug/kg	98.8	1					
Potassium		1500000	14700	57300	ug/kg	98.8	1					
Selenium	U	ND	1150	6870	ug/kg	98.8	1					
Vanadium		71200	229	1150	ug/kg	98.8	1					
Zinc		51500	916	4580	ug/kg	98.8	1					
Silver	U	ND	2290	11500	ug/kg	98.8	10	TXT1	12/06/19	1722	1945551	4
Thallium	U	ND	11500	45800	ug/kg	98.8	10					
Calcium		452000	18300	57300	ug/kg	98.8	1	TXT1	12/09/19	1208	1945551	5
Sodium		71900	14800	52800	ug/kg	91.1	1	LS	12/10/19	1413	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	26.8	4.36	30.5	ug/kg	94.0	2	PRB	12/11/19	1410	1945538	7
Uranium-238		2530	28.8	87.2	ug/kg	94.0	2					
Uranium-234	U	ND	4.36	21.8	ug/kg	94.0	2	PRB	12/11/19	1533	1945538	8
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-52 0"-6"  
Sample ID: 498097003

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		465	9.66	26.8	mg/kg	46.3	5	KLP1	12/10/19	1055	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-52 6"-12"	Project: WNUC01519
Sample ID: 498097004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 57.9%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	1.69	0.825	2.43	mg/kg	10.2	1	LXA2	12/06/19	0525	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	58.5	33.8	102	ug/kg	107	1	CW2	12/06/19	1040	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		23900000	14500	42700	ug/kg	89.9	1	TXT1	12/06/19	1725	1945551	3
Antimony	U	ND	704	4270	ug/kg	89.9	1					
Arsenic	J	3090	1070	6400	ug/kg	89.9	1					
Barium		146000	213	1070	ug/kg	89.9	1					
Beryllium		1930	213	1070	ug/kg	89.9	1					
Cadmium	U	ND	213	1070	ug/kg	89.9	1					
Chromium		34600	320	2130	ug/kg	89.9	1					
Cobalt		10300	320	1070	ug/kg	89.9	1					
Copper		19600	640	4270	ug/kg	89.9	1					
Iron		18500000	17100	53300	ug/kg	89.9	1					
Lead		23400	704	4270	ug/kg	89.9	1					
Magnesium		3020000	18100	64000	ug/kg	89.9	1					
Manganese		186000	427	2130	ug/kg	89.9	1					
Nickel		11600	320	1070	ug/kg	89.9	1					
Potassium		850000	13700	53300	ug/kg	89.9	1					
Selenium	U	ND	1070	6400	ug/kg	89.9	1					
Vanadium		81000	213	1070	ug/kg	89.9	1					
Zinc		54700	854	4270	ug/kg	89.9	1					
Silver	U	ND	2130	10700	ug/kg	89.9	10	TXT1	12/06/19	1728	1945551	4
Thallium	U	ND	10700	42700	ug/kg	89.9	10					
Calcium		317000	17100	53300	ug/kg	89.9	1	TXT1	12/09/19	1211	1945551	5
Sodium		76600	15700	56000	ug/kg	94.3	1	LS	12/10/19	1415	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	29.5	4.65	32.6	ug/kg	98.0	2	PRB	12/11/19	1412	1945538	7
Uranium-238		2690	30.7	93.1	ug/kg	98.0	2					
Uranium-234	U	ND	4.65	23.3	ug/kg	98.0	2	PRB	12/11/19	1535	1945538	8
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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Client Sample ID: SED-52 6"-12"	Project: WNUC01519
Sample ID: 498097004	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		271	11.1	30.9	mg/kg	52.1	5	KLP1	12/10/19	1056	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-53 0"-6"	Project: WNUC01519
Sample ID: 498097005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 47.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	0.838	0.646	1.90	mg/kg	10.0	1	LXA2	12/06/19	0556	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	82.5	29.5	88.7	ug/kg	117	1	CW2	12/06/19	1041	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		23100000	11800	34600	ug/kg	91.1	1	TXT1	12/06/19	1737	1945551	3
Antimony	U	ND	571	3460	ug/kg	91.1	1					
Arsenic	J	3440	865	5190	ug/kg	91.1	1					
Barium		146000	173	865	ug/kg	91.1	1					
Beryllium		1770	173	865	ug/kg	91.1	1					
Cadmium	U	ND	173	865	ug/kg	91.1	1					
Chromium		30200	260	1730	ug/kg	91.1	1					
Cobalt		8500	260	865	ug/kg	91.1	1					
Copper		23500	519	3460	ug/kg	91.1	1					
Iron		15400000	13800	43300	ug/kg	91.1	1					
Lead		26900	571	3460	ug/kg	91.1	1					
Magnesium		27600000	14700	51900	ug/kg	91.1	1					
Manganese		258000	346	1730	ug/kg	91.1	1					
Nickel		11600	260	865	ug/kg	91.1	1					
Potassium		13500000	11100	43300	ug/kg	91.1	1					
Selenium	J	1260	865	5190	ug/kg	91.1	1					
Thallium	U	ND	865	3460	ug/kg	91.1	1					
Vanadium		71000	173	865	ug/kg	91.1	1					
Zinc		52700	692	3460	ug/kg	91.1	1					
Silver	U	ND	1730	8650	ug/kg	91.1	10	TXT1	12/06/19	1740	1945551	4
Calcium		523000	13800	43300	ug/kg	91.1	1	TXT1	12/09/19	1214	1945551	5
Sodium		53800	12800	45800	ug/kg	96.3	1	LS	12/10/19	1418	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		29.2	3.45	24.2	ug/kg	90.9	2	PRB	12/11/19	1417	1945538	7
Uranium-238		3200	22.8	69.1	ug/kg	90.9	2					
Uranium-234	U	ND	3.45	17.3	ug/kg	90.9	2	PRB	12/11/19	1541	1945538	8
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-53 0"-6"  
Sample ID: 498097005

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		387	8.06	22.4	mg/kg	47.2	5	KLP1	12/10/19	1056	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-53 6"-12"	Project: WNUC01519
Sample ID: 498097006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 36.3%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	0.607	0.510	1.50	mg/kg	9.55	1	LXA2	12/06/19	0626	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	48.3	22.1	66.4	ug/kg	106	1	CW2	12/06/19	1043	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		24100000	10600	31300	ug/kg	99.6	1	TXT1	12/06/19	1743	1945551	3
Arsenic	J	3750	782	4690	ug/kg	99.6	1					
Barium		151000	156	782	ug/kg	99.6	1					
Beryllium		2520	156	782	ug/kg	99.6	1					
Cadmium	U	ND	156	782	ug/kg	99.6	1					
Chromium		32500	235	1560	ug/kg	99.6	1					
Cobalt		13700	235	782	ug/kg	99.6	1					
Copper		21800	469	3130	ug/kg	99.6	1					
Iron		25200000	12500	39100	ug/kg	99.6	1					
Lead		16900	516	3130	ug/kg	99.6	1					
Magnesium		3810000	13300	46900	ug/kg	99.6	1					
Manganese		281000	313	1560	ug/kg	99.6	1					
Nickel		13200	235	782	ug/kg	99.6	1					
Potassium		1150000	10000	39100	ug/kg	99.6	1					
Selenium	J	1200	782	4690	ug/kg	99.6	1					
Vanadium		87600	156	782	ug/kg	99.6	1					
Zinc		63900	626	3130	ug/kg	99.6	1					
Antimony	U	ND	5160	31300	ug/kg	99.6	10	TXT1	12/06/19	1746	1945551	4
Silver	U	ND	1560	7820	ug/kg	99.6	10					
Thallium	U	ND	7820	31300	ug/kg	99.6	10					
Calcium		337000	12500	39100	ug/kg	99.6	1	TXT1	12/09/19	1217	1945551	5
Sodium		52900	10400	37000	ug/kg	94.2	1	LS	12/10/19	1420	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		24.7	2.82	19.7	ug/kg	89.6	2	PRB	12/11/19	1419	1945538	7
Uranium-238		3290	18.6	56.3	ug/kg	89.6	2					
Uranium-234	U	ND	2.82	14.1	ug/kg	89.6	2	PRB	12/11/19	1543	1945538	8
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-53 6"-12"  
Sample ID: 498097006

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		196	5.20	14.4	mg/kg	36.8	5	KLP1	12/10/19	1057	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01-112719	Project: WNUC01519
Sample ID: 498097007	Client ID: WNUC009
Matrix: Water	
Collect Date: 27-NOV-19 12:30	
Receive Date: 04-DEC-19	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "As Received"</b>												
Fluoride	U	ND	0.033	0.100	mg/L		1	CH5	12/05/19	0114	1945533	1
<b>Mercury Analysis-CVAA</b>												
<b>7470 Cold Vapor Mercury, Liquid "As Received"</b>												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	CW2	12/06/19	1046	1945742	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3005A/6010D Metals Scan Liquid "As Received"</b>												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	TXT1	12/06/19	1643	1945555	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	U	ND	3.30	20.0	ug/L	1.00	1					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3010A/6020B "As Received"</b>												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	12/11/19	1357	1945540	4
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	12/11/19	1517	1945540	5
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01-112719  
Sample ID: 498097007

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia	J	0.0217	0.017	0.050	mg/L	1.00	1	KLP1	12/10/19	1005	1945071	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	12/10/19	0809	1945070
SW846 3005A	SW846 3005A for 6010D	HH1	12/05/19	1615	1945554
SW846 3010A	SW 846 3010 Acid Digestion	HH1	12/05/19	1615	1945539
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	12/05/19	1424	1945741

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor                      Lc/LC: Critical Level  
DL: Detection Limit                      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56 6"-12"	Project: WNUC01519
Sample ID: 498097008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:30	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 40.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	0.690	0.537	1.58	mg/kg	9.46	1	LXA2	12/06/19	0657	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	41.0	23.7	71.3	ug/kg	107	1	CW2	12/06/19	1045	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		27300000	11100	32600	ug/kg	97.7	1	TXT1	12/06/19	1749	1945551	3
Antimony	U	ND	538	3260	ug/kg	97.7	1					
Arsenic		5260	815	4890	ug/kg	97.7	1					
Barium		190000	163	815	ug/kg	97.7	1					
Beryllium		4250	163	815	ug/kg	97.7	1					
Cadmium	U	ND	163	815	ug/kg	97.7	1					
Chromium		33000	245	1630	ug/kg	97.7	1					
Cobalt		13400	245	815	ug/kg	97.7	1					
Copper		28600	489	3260	ug/kg	97.7	1					
Iron		21400000	13000	40800	ug/kg	97.7	1					
Lead		18500	538	3260	ug/kg	97.7	1					
Magnesium		39600000	13900	48900	ug/kg	97.7	1					
Manganese		250000	326	1630	ug/kg	97.7	1					
Nickel		17500	245	815	ug/kg	97.7	1					
Potassium		11500000	10400	40800	ug/kg	97.7	1					
Selenium	U	ND	815	4890	ug/kg	97.7	1					
Thallium	U	ND	815	3260	ug/kg	97.7	1					
Vanadium		79800	163	815	ug/kg	97.7	1					
Zinc		83500	652	3260	ug/kg	97.7	1					
Silver	U	ND	1630	8150	ug/kg	97.7	10	TXT1	12/06/19	1752	1945551	4
Calcium		202000	13000	40800	ug/kg	97.7	1	TXT1	12/09/19	1220	1945551	5
Sodium		69800	11000	39400	ug/kg	94.5	1	LS	12/10/19	1427	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	21.7	3.27	22.9	ug/kg	98.0	2	PRB	12/11/19	1420	1945538	7
Uranium-238		2970	21.6	65.5	ug/kg	98.0	2					
Uranium-234	U	ND	3.27	16.4	ug/kg	98.0	2	PRB	12/11/19	1545	1945538	8
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56 6"-12"  
Sample ID: 498097008

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		244	5.61	15.6	mg/kg	37.3	5	KLP1	12/10/19	1102	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-54 0"-6"	Project: WNUC01519
Sample ID: 498097009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 75.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	1.93	1.42	4.16	mg/kg	10.2	1	LXA2	12/06/19	0728	1945544	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	104	64.7	195	ug/kg	120	1	CW2	12/06/19	1050	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		27300000	25300	74400	ug/kg	91.4	1	TXT1	12/06/19	1755	1945551	3
Antimony	U	ND	1230	7440	ug/kg	91.4	1					
Arsenic	J	6540	1860	11200	ug/kg	91.4	1					
Barium		144000	372	1860	ug/kg	91.4	1					
Beryllium	J	1610	372	1860	ug/kg	91.4	1					
Cadmium	U	ND	372	1860	ug/kg	91.4	1					
Chromium		34500	558	3720	ug/kg	91.4	1					
Cobalt		6780	558	1860	ug/kg	91.4	1					
Copper		25600	1120	7440	ug/kg	91.4	1					
Iron		18100000	29800	93000	ug/kg	91.4	1					
Lead		29800	1230	7440	ug/kg	91.4	1					
Magnesium		23900000	31600	112000	ug/kg	91.4	1					
Manganese		127000	744	3720	ug/kg	91.4	1					
Nickel		12100	558	1860	ug/kg	91.4	1					
Potassium		13100000	23800	93000	ug/kg	91.4	1					
Selenium	U	ND	1860	11200	ug/kg	91.4	1					
Vanadium		77100	372	1860	ug/kg	91.4	1					
Zinc		54100	1490	7440	ug/kg	91.4	1					
Silver	U	ND	3720	18600	ug/kg	91.4	10	TXT1	12/06/19	1758	1945551	4
Thallium	U	ND	18600	74400	ug/kg	91.4	10					
Calcium		348000	29800	93000	ug/kg	91.4	1	TXT1	12/09/19	1223	1945551	5
Sodium	J	88000	26100	93300	ug/kg	91.7	1	LS	12/10/19	1429	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	22.6	7.42	52.0	ug/kg	91.2	2	PRB	12/11/19	1422	1945538	7
Uranium-238		2870	49.0	148	ug/kg	91.2	2					
Uranium-234	U	ND	7.42	37.1	ug/kg	91.2	2	PRB	12/11/19	1547	1945538	8
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-54 0"-6"  
Sample ID: 498097009

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		854	15.5	43.1	mg/kg	42.4	5	KLP1	12/10/19	1103	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/04/19	1830	1945543

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-54 6"-12"	Project: WNUC01519
Sample ID: 498097010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:10	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 64.7%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	J	1.01	0.961	2.83	mg/kg	9.98	1	JLD1	12/07/19	0153	1945958	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	65.2	44.7	134	ug/kg	119	1	CW2	12/06/19	1051	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		26800000	18000	53000	ug/kg	93.5	1	TXT1	12/06/19	1800	1945551	3
Antimony	U	ND	874	5300	ug/kg	93.5	1					
Arsenic	J	4470	1320	7940	ug/kg	93.5	1					
Barium		124000	265	1320	ug/kg	93.5	1					
Beryllium		1640	265	1320	ug/kg	93.5	1					
Cadmium	U	ND	265	1320	ug/kg	93.5	1					
Chromium		33400	397	2650	ug/kg	93.5	1					
Cobalt		7100	397	1320	ug/kg	93.5	1					
Copper		21100	794	5300	ug/kg	93.5	1					
Iron		15800000	21200	66200	ug/kg	93.5	1					
Lead		25900	874	5300	ug/kg	93.5	1					
Magnesium		2700000	22500	79400	ug/kg	93.5	1					
Manganese		114000	530	2650	ug/kg	93.5	1					
Nickel		12600	397	1320	ug/kg	93.5	1					
Potassium		1410000	16900	66200	ug/kg	93.5	1					
Selenium	J	1340	1320	7940	ug/kg	93.5	1					
Vanadium		78900	265	1320	ug/kg	93.5	1					
Zinc		53400	1060	5300	ug/kg	93.5	1					
Silver	U	ND	2650	13200	ug/kg	93.5	10	TXT1	12/06/19	1803	1945551	4
Thallium	U	ND	13200	53000	ug/kg	93.5	10					
Calcium		187000	21200	66200	ug/kg	93.5	1	TXT1	12/09/19	1233	1945551	5
Sodium		70600	17800	63500	ug/kg	89.6	1	LS	12/10/19	1431	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	26.0	5.07	35.5	ug/kg	89.4	2	PRB	12/11/19	1424	1945538	7
Uranium-238		2990	33.5	101	ug/kg	89.4	2					
Uranium-234	U	ND	5.07	25.3	ug/kg	89.4	2	PRB	12/11/19	1549	1945538	8
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

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Client Sample ID: SED-54 6"-12"	Project: WNUC01519
Sample ID: 498097010	Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		536	9.81	27.2	mg/kg	38.5	5	KLP1	12/10/19	1104	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-55 0"-6"	Project:	WNUC01519
Sample ID:	498097011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-19 11:15		
Receive Date:	04-DEC-19		
Collector:	Client		
Moisture:	48.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	U	ND	0.640	1.88	mg/kg	9.73	1	JLD1	12/09/19	2320	1946463	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	76.6	28.5	85.6	ug/kg	111	1	CW2	12/06/19	1053	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		29400000	12400	36600	ug/kg	94.5	1	TXT1	12/06/19	1837	1945551	3
Antimony	U	ND	603	3660	ug/kg	94.5	1					
Arsenic	J	4600	914	5480	ug/kg	94.5	1					
Barium		153000	183	914	ug/kg	94.5	1					
Beryllium		1880	183	914	ug/kg	94.5	1					
Cadmium	U	ND	183	914	ug/kg	94.5	1					
Chromium		36400	274	1830	ug/kg	94.5	1					
Cobalt		8470	274	914	ug/kg	94.5	1					
Copper		24300	548	3660	ug/kg	94.5	1					
Iron		19100000	14600	45700	ug/kg	94.5	1					
Lead		33900	603	3660	ug/kg	94.5	1					
Magnesium		2920000	15500	54800	ug/kg	94.5	1					
Manganese		175000	366	1830	ug/kg	94.5	1					
Nickel		13500	274	914	ug/kg	94.5	1					
Potassium		1370000	11700	45700	ug/kg	94.5	1					
Selenium	U	ND	914	5480	ug/kg	94.5	1					
Vanadium		93200	183	914	ug/kg	94.5	1					
Zinc		56100	731	3660	ug/kg	94.5	1					
Silver	U	ND	1830	9140	ug/kg	94.5	10	TXT1	12/06/19	1847	1945551	4
Thallium	U	ND	9140	36600	ug/kg	94.5	10					
Calcium		191000	14600	45700	ug/kg	94.5	1	TXT1	12/09/19	1245	1945551	5
Sodium		84100	13400	47900	ug/kg	99.0	1	LS	12/10/19	1353	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	25.4	3.67	25.7	ug/kg	94.9	2	PRB	12/11/19	1429	1945538	7
Uranium-238		3450	24.2	73.4	ug/kg	94.9	2					
Uranium-234	U	ND	3.67	18.3	ug/kg	94.9	2	PRB	12/11/19	1555	1945538	8
<b>Nutrient Analysis</b>												

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-55 0"-6"  
Sample ID: 498097011

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		321	9.46	26.3	mg/kg	54.3	5	KLP1	12/10/19	1105	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/09/19	1742	1946461

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID:	SED-55 6"-12"	Project:	WNUC01519
Sample ID:	498097012	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-19 11:20		
Receive Date:	04-DEC-19		
Collector:	Client		
Moisture:	41%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	U	ND	0.597	1.76	mg/kg	10.4	1	JLD1	12/07/19	0255	1945958	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	54.2	24.9	74.7	ug/kg	110	1	CW2	12/06/19	1102	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		29300000	10300	30400	ug/kg	89.6	1	TXT1	12/06/19	1813	1945551	3
Antimony	U	ND	501	3040	ug/kg	89.6	1					
Arsenic		4560	759	4550	ug/kg	89.6	1					
Barium		159000	152	759	ug/kg	89.6	1					
Beryllium		3390	152	759	ug/kg	89.6	1					
Cadmium	U	ND	152	759	ug/kg	89.6	1					
Chromium		35900	228	1520	ug/kg	89.6	1					
Cobalt		15600	228	759	ug/kg	89.6	1					
Copper		26800	455	3040	ug/kg	89.6	1					
Iron		21900000	12100	38000	ug/kg	89.6	1					
Lead		17000	501	3040	ug/kg	89.6	1					
Magnesium		3650000	12900	45500	ug/kg	89.6	1					
Manganese		264000	304	1520	ug/kg	89.6	1					
Nickel		15500	228	759	ug/kg	89.6	1					
Potassium		834000	9720	38000	ug/kg	89.6	1					
Selenium	J	1240	759	4550	ug/kg	89.6	1					
Vanadium		86200	152	759	ug/kg	89.6	1					
Zinc		70800	607	3040	ug/kg	89.6	1					
Silver	U	ND	1520	7590	ug/kg	89.6	10	TXT1	12/06/19	1816	1945551	4
Thallium	U	ND	7590	30400	ug/kg	89.6	10					
Calcium		190000	12100	38000	ug/kg	89.6	1	TXT1	12/09/19	1236	1945551	5
Sodium		87000	11800	42100	ug/kg	99.4	1	LS	12/10/19	1434	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235		23.2	3.19	22.3	ug/kg	94.2	2	PRB	12/11/19	1438	1945538	7
Uranium-238		3230	21.1	63.8	ug/kg	94.2	2					
Uranium-234	U	ND	3.19	16.0	ug/kg	94.2	2	PRB	12/11/19	1605	1945538	8
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-55 6"-12"  
Sample ID: 498097012

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		223	6.15	17.1	mg/kg	40.3	5	KLP1	12/10/19	1107	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56 0"-6"	Project: WNUC01519
Sample ID: 498097013	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:25	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 47.4%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	U	ND	0.642	1.89	mg/kg	9.93	1	JLD1	12/07/19	0326	1945958	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury	J	74.6	29.5	88.8	ug/kg	117	1	CW2	12/06/19	1103	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		27000000	12200	36000	ug/kg	94.5	1	TXT1	12/06/19	1819	1945551	3
Antimony	U	ND	593	3600	ug/kg	94.5	1					
Arsenic	J	4540	899	5390	ug/kg	94.5	1					
Barium		166000	180	899	ug/kg	94.5	1					
Beryllium		2210	180	899	ug/kg	94.5	1					
Cadmium	U	ND	180	899	ug/kg	94.5	1					
Chromium		33400	270	1800	ug/kg	94.5	1					
Cobalt		8860	270	899	ug/kg	94.5	1					
Copper		25400	539	3600	ug/kg	94.5	1					
Iron		17100000	14400	44900	ug/kg	94.5	1					
Lead		31500	593	3600	ug/kg	94.5	1					
Magnesium		2740000	15300	53900	ug/kg	94.5	1					
Manganese		173000	360	1800	ug/kg	94.5	1					
Nickel		13500	270	899	ug/kg	94.5	1					
Potassium		1170000	11500	44900	ug/kg	94.5	1					
Selenium	J	1300	899	5390	ug/kg	94.5	1					
Vanadium		81800	180	899	ug/kg	94.5	1					
Zinc		55600	719	3600	ug/kg	94.5	1					
Silver	U	ND	1800	8990	ug/kg	94.5	10	TXT1	12/06/19	1822	1945551	4
Thallium	U	ND	8990	36000	ug/kg	94.5	10					
Calcium		289000	14400	44900	ug/kg	94.5	1	TXT1	12/09/19	1239	1945551	5
Sodium		63200	11800	42200	ug/kg	88.7	1	LS	12/10/19	1436	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	23.0	3.44	24.1	ug/kg	90.4	2	PRB	12/11/19	1439	1945538	7
Uranium-238		3100	22.7	68.8	ug/kg	90.4	2					
Uranium-234	U	ND	3.44	17.2	ug/kg	90.4	2	PRB	12/11/19	1607	1945538	8
<b>Nutrient Analysis</b>												

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56 0"-6"  
Sample ID: 498097013

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		449	5.28	14.7	mg/kg	30.9	5	KLP1	12/10/19	1108	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

MDA: Minimum Detectable Activity

MDC: Minimum Detectable Concentration

Lc/LC: Critical Level

PF: Prep Factor

RL: Reporting Limit

SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56-DUP 0"-6"	Project: WNUC01519
Sample ID: 498097014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:25	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 48.1%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "Dry Weight Corrected"</b>												
Fluoride	U	ND	0.666	1.96	mg/kg	10.2	1	JLD1	12/07/19	0357	1945958	1
<b>Mercury Analysis-CVAA</b>												
<b>7471 Cold Vapor Mercury, Solid "Dry Weight Corrected"</b>												
Mercury		83.7	27.8	83.7	ug/kg	109	1	CW2	12/06/19	1105	1945748	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3050B/6010D Metals, Solid "Dry Weight Corrected"</b>												
Aluminum		27200000	11800	34700	ug/kg	90.1	1	TXT1	12/06/19	1825	1945551	3
Antimony	U	ND	572	3470	ug/kg	90.1	1					
Arsenic	J	4870	867	5200	ug/kg	90.1	1					
Barium		170000	173	867	ug/kg	90.1	1					
Beryllium		2280	173	867	ug/kg	90.1	1					
Cadmium	U	ND	173	867	ug/kg	90.1	1					
Chromium		34100	260	1730	ug/kg	90.1	1					
Cobalt		9360	260	867	ug/kg	90.1	1					
Copper		26400	520	3470	ug/kg	90.1	1					
Iron		18700000	13900	43400	ug/kg	90.1	1					
Lead		30000	572	3470	ug/kg	90.1	1					
Magnesium		3040000	14700	52000	ug/kg	90.1	1					
Manganese		194000	347	1730	ug/kg	90.1	1					
Nickel		13900	260	867	ug/kg	90.1	1					
Potassium		1280000	11100	43400	ug/kg	90.1	1					
Selenium	U	ND	867	5200	ug/kg	90.1	1					
Vanadium		86900	173	867	ug/kg	90.1	1					
Zinc		59100	694	3470	ug/kg	90.1	1					
Silver	U	ND	1730	8670	ug/kg	90.1	10	TXT1	12/06/19	1828	1945551	4
Thallium	U	ND	8670	34700	ug/kg	90.1	10					
Calcium		297000	13900	43400	ug/kg	90.1	1	TXT1	12/09/19	1242	1945551	5
Sodium		71300	12800	45700	ug/kg	94.9	1	LS	12/10/19	1438	1947080	6
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3050B/6020B "Dry Weight Corrected"</b>												
Uranium-235	J	24.5	3.77	26.4	ug/kg	97.8	2	PRB	12/11/19	1441	1945538	7
Uranium-238		3440	24.9	75.4	ug/kg	97.8	2					
Uranium-234	U	ND	3.77	18.8	ug/kg	97.8	2	PRB	12/11/19	1609	1945538	8
<b>Nutrient Analysis</b>												

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56-DUP 0"-6"  
Sample ID: 498097014

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		325	6.28	17.4	mg/kg	36.2	5	KLP1	12/10/19	1109	1945285	9

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.2 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/10/19	0809	1945284
SW846 3050B	ICP-MS 3050BS PREP	SM1	12/06/19	1000	1945537
SW846 3050B	SW846 3050B Prep	HH1	12/09/19	1655	1947079
SW846 3050B	SW846 3050B Prep	SM1	12/06/19	1100	1945549
SW846 7471A Prep	EPA 7471A Mercury Prep Soil	AXS5	12/05/19	1536	1945746
SW846 9056A	SW846 9056A Total Anions in Soil	CJ2	12/05/19	2012	1945955

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7471A	
3	SW846 3050B/6010D	
4	SW846 3050B/6010D	
5	SW846 3050B/6010D	
6	SW846 3050B/6010D	
7	SW846 3050B/6020B	
8	SW846 3050B/6020B	
9	EPA 350.1 Modified	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

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Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01 120219  
Sample ID: 498097015  
Matrix: Water  
Collect Date: 02-DEC-19 12:35  
Receive Date: 04-DEC-19  
Collector: Client

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
<b>SW846 9056A Fluoride "As Received"</b>												
Fluoride	U	ND	0.033	0.100	mg/L		1	CH5	12/05/19	0143	1945533	1
<b>Mercury Analysis-CVAA</b>												
<b>7470 Cold Vapor Mercury, Liquid "As Received"</b>												
Mercury	U	ND	0.067	0.200	ug/L	1.00	1	CW2	12/06/19	1048	1945742	2
<b>Metals Analysis-ICP</b>												
<b>SW846 3005A/6010D Metals Scan Liquid "As Received"</b>												
Aluminum	U	ND	68.0	200	ug/L	1.00	1	TXT1	12/06/19	1650	1945555	3
Antimony	U	ND	3.50	20.0	ug/L	1.00	1					
Arsenic	U	ND	5.00	30.0	ug/L	1.00	1					
Barium	U	ND	1.00	5.00	ug/L	1.00	1					
Beryllium	U	ND	1.00	5.00	ug/L	1.00	1					
Cadmium	U	ND	1.00	5.00	ug/L	1.00	1					
Calcium	U	ND	50.0	200	ug/L	1.00	1					
Chromium	U	ND	1.00	10.0	ug/L	1.00	1					
Cobalt	U	ND	1.00	5.00	ug/L	1.00	1					
Copper	U	ND	3.00	20.0	ug/L	1.00	1					
Iron	U	ND	30.0	100	ug/L	1.00	1					
Lead	U	ND	3.30	20.0	ug/L	1.00	1					
Magnesium	U	ND	110	300	ug/L	1.00	1					
Manganese	U	ND	2.00	10.0	ug/L	1.00	1					
Nickel	U	ND	1.50	5.00	ug/L	1.00	1					
Potassium	U	ND	50.0	150	ug/L	1.00	1					
Selenium	U	ND	6.00	30.0	ug/L	1.00	1					
Silver	U	ND	1.00	5.00	ug/L	1.00	1					
Sodium	U	ND	100	300	ug/L	1.00	1					
Thallium	U	ND	5.00	20.0	ug/L	1.00	1					
Vanadium	U	ND	1.00	5.00	ug/L	1.00	1					
Zinc	U	ND	3.30	20.0	ug/L	1.00	1					
<b>Metals Analysis-ICP-MS</b>												
<b>SW846 3010A/6020B "As Received"</b>												
Uranium-235	U	ND	0.010	0.070	ug/L	1.00	1	PRB	12/11/19	1358	1945540	4
Uranium-238	U	ND	0.067	0.200	ug/L	1.00	1					
Uranium-234	U	ND	0.010	0.050	ug/L	1.00	1	PRB	12/11/19	1519	1945540	5
<b>Nutrient Analysis</b>												

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01 120219  
Sample ID: 498097015

Project: WNUC01519  
Client ID: WNUC009

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "As Received"												
Nitrogen, Ammonia	U	ND	0.017	0.050	mg/L	1.00	1	KLP1	12/10/19	1006	1945071	6

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Prep	EPA 350.1 Ammonia Nitrogen Prep	KLP1	12/10/19	0809	1945070
SW846 3005A	SW846 3005A for 6010D	HH1	12/05/19	1615	1945554
SW846 3010A	SW 846 3010 Acid Digestion	HH1	12/05/19	1615	1945539
SW846 7470A Prep	EPA 7470A Mercury Prep Liquid	AXS5	12/05/19	1424	1945741

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	SW846 7470A	
3	SW846 3005A/6010D	
4	SW846 3010A/6020B	
5	SW846 3010A/6020B	
6	EPA 350.1	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration

Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-51 6"-12"	Project: WNUC01519
Sample ID: 498097001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 10:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 66%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.27	+/-0.406	0.216	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.0695	+/-0.137	0.189	0.500	pCi/g							
Uranium-238		1.15	+/-0.381	0.0958	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	4.89	+/-13.0	22.3	50.0	pCi/g			JJ3	12/10/19	0523	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			98.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-51 0"-6"	Project: WNUC01519
Sample ID: 498097002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 10:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 69.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.10	+/-0.503	0.219	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.178	+/-0.181	0.179	0.500	pCi/g							
Uranium-238		1.42	+/-0.416	0.199	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-4.87	+/-18.3	32.1	50.0	pCi/g			JJ3	12/10/19	0545	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			99.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			94.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-52 0"-6"	Project: WNUC01519
Sample ID: 498097003	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 11:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 56.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.77	+/-0.609	0.417	0.500	pCi/g			MXS2	12/07/19	0901	1945413	1
Uranium-235/236	U	0.308	+/-0.324	0.403	0.500	pCi/g							
Uranium-238		1.72	+/-0.583	0.237	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-14.5	+/-16.6	29.7	50.0	pCi/g			JJ3	12/10/19	0607	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			70.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

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DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-52 6"-12"	Project: WNUC01519
Sample ID: 498097004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 57.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.88	+/-0.491	0.273	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.0494	+/-0.136	0.236	0.500	pCi/g							
Uranium-238		1.45	+/-0.430	0.231	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-15.7	+/-22.2	39.5	50.0	pCi/g			JJ3	12/10/19	0629	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			91	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-53 0"-6"	Project: WNUC01519
Sample ID: 498097005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:00	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 47.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.15	+/-0.463	0.202	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236		0.194	+/-0.174	0.189	0.500	pCi/g							
Uranium-238		1.45	+/-0.381	0.165	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-8.9	+/-21.3	37.5	50.0	pCi/g			JJ3	12/10/19	0651	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			95.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-53 6"-12"	Project: WNUC01519
Sample ID: 498097006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 27-NOV-19 13:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 36.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.06	+/-0.814	0.570	0.500	pCi/g			MXS2	12/10/19	1231	1945413	1
Uranium-235/236	U	0.0708	+/-0.266	0.447	0.500	pCi/g							
Uranium-238		2.34	+/-0.852	0.497	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-9.38	+/-22.8	40.2	50.0	pCi/g			JJ3	12/10/19	0713	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			44.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			96.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01-112719      Project: WNUC01519  
Sample ID: 498097007      Client ID: WNUC009  
Matrix: Water  
Collect Date: 27-NOV-19 12:30  
Receive Date: 04-DEC-19  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time Batch	Method
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### Rad Alpha Spec Analysis

#### Alphaspec U, Liquid "As Received"

Pct Uranium-235	U	0.00				percent			MXS2	12/05/19	1215 1945391	1
Uranium-233/234	U	0.139	+/-0.186	0.268	0.500	pCi/L						
Uranium-235/236	U	0.214	+/-0.230	0.262	0.500	pCi/L						
Uranium-238	U	0.0888	+/-0.175	0.297	0.500	pCi/L						

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	18.0	+/-23.6	39.9	50.0	pCi/L		JJ3		12/10/19	0410 1945548	2
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			70.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			95.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

### Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56 6"-12"	Project: WNUC01519
Sample ID: 498097008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:30	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 40.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.89	+/-0.476	0.261	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.0276	+/-0.103	0.174	0.500	pCi/g							
Uranium-238		1.72	+/-0.447	0.163	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-5.52	+/-21.0	36.7	50.0	pCi/g			JJ3	12/10/19	0734	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			85.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-54 0"-6"	Project: WNUC01519
Sample ID: 498097009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:05	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 75.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		1.78	+/-0.441	0.200	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.119	+/-0.150	0.186	0.500	pCi/g							
Uranium-238		1.36	+/-0.386	0.179	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	1.51	+/-21.4	37.1	50.0	pCi/g			JJ3	12/10/19	0756	1945561	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			82.4	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-54 6"-12"	Project: WNUC01519
Sample ID: 498097010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:10	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 64.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.48	+/-0.459	0.233	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.120	+/-0.173	0.209	0.500	pCi/g							
Uranium-238		1.87	+/-0.514	0.232	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-8.79	+/-14.3	25.3	50.0	pCi/g			JJ3	12/10/19	0818	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			83.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-55 0"-6"	Project: WNUC01519
Sample ID: 498097011	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:15	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 48.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.05	+/-0.511	0.257	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	-0.0281	+/-0.0848	0.238	0.500	pCi/g							
Uranium-238		1.74	+/-0.468	0.193	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	6.19	+/-23.5	40.4	50.0	pCi/g			JJ3	12/10/19	0840	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			84.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-55 6"-12"	Project: WNUC01519
Sample ID: 498097012	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:20	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 41%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		1.62	+/-0.452	0.211	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236		0.155	+/-0.171	0.116	0.500	pCi/g							
Uranium-238		1.62	+/-0.449	0.174	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	-2.27	+/-21.2	36.9	50.0	pCi/g			JJ3	12/10/19	0902	1945561	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			81.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56 0"-6"	Project: WNUC01519
Sample ID: 498097013	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:25	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 47.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		2.02	+/-0.485	0.230	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236		0.214	+/-0.186	0.107	0.500	pCi/g							
Uranium-238		1.40	+/-0.402	0.160	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	2.53	+/-18.3	31.5	50.0	pCi/g			JJ3	12/10/19	0924	1945561	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			97.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.4	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: SED-56-DUP 0"-6"	Project: WNUC01519
Sample ID: 498097014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-19 11:25	
Receive Date: 04-DEC-19	
Collector: Client	
Moisture: 48.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.82	+/-0.722	0.312	0.500	pCi/g			MXS2	12/07/19	0857	1945413	1
Uranium-235/236	U	0.115	+/-0.196	0.172	0.500	pCi/g							
Uranium-238		2.11	+/-0.624	0.257	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-11.8	+/-17.2	30.6	50.0	pCi/g			JJ3	12/10/19	0946	1945561	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	12/05/19	0819	1945402

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			67	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			82.1	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2019

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Logsdon  
Project: ENV-CONSENTA

Client Sample ID: EB-01 120219      Project: WNUC01519  
Sample ID: 498097015      Client ID: WNUC009  
Matrix: Water  
Collect Date: 02-DEC-19 12:35  
Receive Date: 04-DEC-19  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Liquid "As Received"</b>													
Pct Uranium-235	U	0.00				percent			MXS2	12/05/19	1215	1945391	1
Uranium-233/234	U	0.0037	+/-0.168	0.371	0.500	pCi/L							
Uranium-235/236	U	0.146	+/-0.232	0.321	0.500	pCi/L							
Uranium-238	U	0.0601	+/-0.165	0.287	0.500	pCi/L							

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Liquid "As Received"

Technetium-99	U	19.5	+/-23.9	40.3	50.0	pCi/L		JJ3	12/10/19	0432	1945548	2
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The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Liquid "As Received"			57.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Liquid "As Received"			97.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

#### Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: December 11, 2019

Page 1 of 20

Westinghouse Electric Company, LLC  
 PO Drawer R  
 Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 498097

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	1945533										
QC1204447637	498037002	DUP									
Fluoride		0.304		0.301	mg/L	0.991 ^		(+/-0.100)	CH5	12/04/19	22:44
QC1204447634	LCS										
Fluoride	2.50			2.41	mg/L		96.3	(90%-110%)		12/04/19	21:45
QC1204447633	MB										
Fluoride			U	ND	mg/L					12/04/19	21:15
QC1204447638	498037002	PS									
Fluoride	2.50	0.304		2.53	mg/L		89.2*	(90%-110%)		12/04/19	23:14
Batch	1945544										
QC1204447649	498097001	DUP									
Fluoride		2.96	J	2.94	mg/kg	0.692 ^		(+/-2.96)	LXA2	12/06/19	02:20
QC1204447648	LCS										
Fluoride	25.0			27.3	mg/kg		109	(90%-110%)		12/06/19	01:18
QC1204447647	MB										
Fluoride			U	ND	mg/kg					12/06/19	00:47
QC1204447650	498097001	MS									
Fluoride	75.2	2.96		17.7	mg/kg		19.5*	(75%-125%)		12/06/19	02:50
Batch	1945958										
QC1204448644	498097010	DUP									
Fluoride		J	1.01	U	ND	mg/kg	200 ^		JLD1	12/07/19	06:31
QC1204448643	LCS										
Fluoride	24.8			25.5	mg/kg		103	(90%-110%)		12/07/19	06:00

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 498097

Page 2 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch 1945958											
QC1204448642		MB									
Fluoride			U	ND	mg/kg				JLD1	12/07/19	05:29
QC1204448645	498097010	MS									
Fluoride	70.8	J	1.01	15.6	mg/kg		20.6*	(75%-125%)		12/07/19	07:02
Batch 1946463											
QC1204451547	498097011	DUP									
Fluoride			U	ND	mg/kg	N/A			JLD1	12/09/19	23:51
QC1204449643		LCS									
Fluoride	24.8			24.8	mg/kg		100	(90%-110%)		12/09/19	22:49
QC1204449642		MB									
Fluoride			U	ND	mg/kg					12/09/19	22:18
QC1204451548	498097011	MS									
Fluoride	47.1	U	ND	12.8	mg/kg		26*	(75%-125%)		12/10/19	00:22
<b>Metals Analysis - ICPMS</b>											
Batch 1945538											
QC1204447625		LCS									
Uranium-235	36.0			34.4	ug/kg		95.5	(80%-120%)	PRB	12/11/19	14:05
Uranium-238	4960			4930	ug/kg		99.4	(80%-120%)			
QC1204447653		LCS									
Uranium-234	54.5			58.2	ug/kg		107	(80%-120%)		12/11/19	15:27
QC1204447624		MB									
Uranium-234			U	ND	ug/kg					12/11/19	15:25
Uranium-235			U	ND	ug/kg					12/11/19	14:03

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 3 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis - ICPMS</b>											
Batch	1945538										
Uranium-238			U	ND	ug/kg				PRB	12/11/19	14:03
QC1204447626	498097011	MS									
Uranium-235	69.5	J	25.4	109	ug/kg		121	(75%-125%)		12/11/19	14:31
Uranium-238	9580		3450	15000	ug/kg		121	(75%-125%)			
QC1204447654	498097011	MS									
Uranium-234	104	U	ND	130	ug/kg		124	(75%-125%)		12/11/19	15:57
QC1204447627	498097011	MSD									
Uranium-235	63.5	J	25.4	100	ug/kg	8.78	118	(0%-20%)		12/11/19	14:32
Uranium-238	8760		3450	13600	ug/kg	9.96	116	(0%-20%)			
QC1204447655	498097011	MSD									
Uranium-234	104	U	ND	127	ug/kg	2.66	121	(0%-20%)		12/11/19	15:59
QC1204447628	498097011	SDILT									
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/11/19	16:03
Uranium-235		J	0.0691	J	0.0127	ug/L	8.1	(0%-20%)		12/11/19	14:36
Uranium-238			9.39		1.58	ug/L	15.8	(0%-20%)			
Batch	1945540										
QC1204447630	LCS										
Uranium-235	0.360			0.370	ug/L		103	(80%-120%)	PRB	12/11/19	13:50
Uranium-238	49.6			50.9	ug/L		103	(80%-120%)			
QC1204447651	LCS										
Uranium-234	0.550			0.611	ug/L		111	(80%-120%)		12/11/19	15:09

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 4 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis - ICPMS</b>											
Batch 1945540											
QC1204447631		LCSD									
Uranium-235	0.360			0.386	ug/L	4.02	107	(0%-20%)	PRB	12/11/19	13:52
Uranium-238	49.6			52.8	ug/L	3.63	106	(0%-20%)			
QC1204447652		LCSD									
Uranium-234	0.550			0.587	ug/L	4.01	107	(0%-20%)		12/11/19	15:11
QC1204447629		MB									
Uranium-234			U	ND	ug/L					12/11/19	15:07
Uranium-235			U	ND	ug/L					12/11/19	13:48
Uranium-238			U	ND	ug/L						
QC1204447632		497772015	SDILT								
Uranium-234		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/11/19	15:15
Uranium-235		U	ND	U	ND	ug/L	N/A	(0%-20%)		12/11/19	13:55
Uranium-238		U	ND	U	ND	ug/L	N/A	(0%-20%)			
<b>Metals Analysis-ICP</b>											
Batch 1945551											
QC1204447664		LCS									
Aluminum	494000			476000	ug/kg		96.3	(80%-120%)	TXT1	12/06/19	17:05
Antimony	49400			46600	ug/kg		94.4	(80%-120%)			
Arsenic	49400			45300	ug/kg		91.7	(80%-120%)			
Barium	49400			47400	ug/kg		96	(80%-120%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 5 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945551										
Beryllium	49400			49100	ug/kg		99.3	(80%-120%)	TXT1	12/06/19	17:05
Cadmium	49400			47000	ug/kg		95.1	(80%-120%)			
Calcium	494000			512000	ug/kg		104	(80%-120%)		12/09/19	12:00
Chromium	49400			47100	ug/kg		95.3	(80%-120%)		12/06/19	17:05
Cobalt	49400			47500	ug/kg		96.1	(80%-120%)			
Copper	49400			48800	ug/kg		98.9	(80%-120%)			
Iron	494000			476000	ug/kg		96.4	(80%-120%)			
Lead	49400			46300	ug/kg		93.8	(80%-120%)			
Magnesium	494000			482000	ug/kg		97.6	(80%-120%)			
Manganese	49400			47200	ug/kg		95.6	(80%-120%)			
Nickel	49400			47300	ug/kg		95.8	(80%-120%)			
Potassium	494000			481000	ug/kg		97.3	(80%-120%)			
Selenium	49400			45000	ug/kg		91	(80%-120%)			
Silver	9880			9380	ug/kg		94.9	(80%-120%)			
Thallium	49400			46600	ug/kg		94.2	(80%-120%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 6 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945551										
Vanadium	49400			47900	ug/kg		96.9	(80%-120%)	TXT1	12/06/19	17:05
Zinc	49400			46200	ug/kg		93.6	(80%-120%)			
QC1204447663	MB										
Aluminum			U	ND	ug/kg					12/06/19	17:01
Antimony			U	ND	ug/kg						
Arsenic			U	ND	ug/kg						
Barium			U	ND	ug/kg						
Beryllium			U	ND	ug/kg						
Cadmium			U	ND	ug/kg						
Calcium			U	ND	ug/kg					12/09/19	11:56
Chromium			U	ND	ug/kg					12/06/19	17:01
Cobalt			U	ND	ug/kg						
Copper			U	ND	ug/kg						
Iron			U	ND	ug/kg						
Lead			U	ND	ug/kg						
Magnesium			U	ND	ug/kg						

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 7 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945551										
Manganese			U	ND	ug/kg				TXT1	12/06/19	17:01
Nickel			U	ND	ug/kg						
Potassium			U	ND	ug/kg						
Selenium			U	ND	ug/kg						
Silver			U	ND	ug/kg						
Thallium			U	ND	ug/kg						
Vanadium			U	ND	ug/kg						
Zinc			U	ND	ug/kg						
QC1204447665 498097011 MS											
Aluminum	963000	29400000		38100000	ug/kg		N/A	(75%-125%)		12/06/19	18:40
Antimony	96300	U	ND	80600	ug/kg		83.7	(75%-125%)			
Arsenic	96300	J	4600	83600	ug/kg		82.1	(75%-125%)			
Barium	96300		153000	246000	ug/kg		96.3	(75%-125%)			
Beryllium	96300		1880	90700	ug/kg		92.2	(75%-125%)			
Cadmium	96300	U	ND	83700	ug/kg		86.9	(75%-125%)			
Calcium	963000		191000	1100000	ug/kg		94.3	(75%-125%)		12/09/19	12:48



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 8 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945551										
Chromium	96300	36400		123000	ug/kg		89.7	(75%-125%)	TXT1	12/06/19	18:40
Cobalt	96300	8470		95000	ug/kg		89.9	(75%-125%)			
Copper	96300	24300		119000	ug/kg		98.5	(75%-125%)			
Iron	963000	19100000		20500000	ug/kg		N/A	(75%-125%)			
Lead	96300	33900		121000	ug/kg		90.1	(75%-125%)			
Magnesium	963000	2920000		3940000	ug/kg		106	(75%-125%)			
Manganese	96300	175000		269000	ug/kg		97.5	(75%-125%)			
Nickel	96300	13500		101000	ug/kg		90.6	(75%-125%)			
Potassium	963000	1370000		2310000	ug/kg		97.1	(75%-125%)			
Selenium	96300	U	ND	79900	ug/kg		82.5	(75%-125%)			
Silver	19300	U	ND	14800	ug/kg		76.6	(75%-125%)		12/06/19	18:50
Thallium	96300	U	ND	82400	ug/kg		85.6	(75%-125%)			
Vanadium	96300	93200		179000	ug/kg		89.5	(75%-125%)		12/06/19	18:40
Zinc	96300	56100		145000	ug/kg		91.9	(75%-125%)			
QC1204447666	498097011	MSD									
Aluminum	959000	29400000		40600000	ug/kg	6.5	N/A	(0%-20%)		12/06/19	18:42

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 9 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945551										
Antimony	95900	U	ND	78100	ug/kg	3.18	81.4	(0%-20%)	TXT1	12/06/19	18:42
Arsenic	95900	J	4600	83500	ug/kg	0.131	82.3	(0%-20%)			
Barium	95900		153000	240000	ug/kg	2.34	90.8	(0%-20%)			
Beryllium	95900		1880	88900	ug/kg	2.01	90.7	(0%-20%)			
Cadmium	95900	U	ND	82300	ug/kg	1.72	85.8	(0%-20%)			
Calcium	959000		191000	1080000	ug/kg	1.53	92.9	(0%-20%)		12/09/19	12:50
Chromium	95900		36400	121000	ug/kg	1.37	88.3	(0%-20%)		12/06/19	18:42
Cobalt	95900		8470	93100	ug/kg	2.04	88.2	(0%-20%)			
Copper	95900		24300	117000	ug/kg	1.54	97	(0%-20%)			
Iron	959000		19100000	22000000	ug/kg	7.07	N/A	(0%-20%)			
Lead	95900		33900	116000	ug/kg	3.98	85.5	(0%-20%)			
Magnesium	959000		2920000	3690000	ug/kg	6.6	80.5	(0%-20%)			
Manganese	95900		175000	246000	ug/kg	9.03	73.6*	(0%-20%)			
Nickel	95900		13500	99300	ug/kg	1.43	89.5	(0%-20%)			
Potassium	959000		1370000	2170000	ug/kg	6.15	83.2	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 10 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945551										
Selenium	95900	U	ND	78700	ug/kg	1.61	81.5	(0%-20%)	TXT1	12/06/19	18:42
Silver	19200	U	ND	15200	ug/kg	3.16	79.4	(0%-20%)		12/06/19	18:53
Thallium	95900	U	ND	84000	ug/kg	1.93	87.6	(0%-20%)			
Vanadium	95900		93200	179000	ug/kg	0.0181	89.9	(0%-20%)		12/06/19	18:42
Zinc	95900		56100	143000	ug/kg	1.37	90.3	(0%-20%)			
QC1204451031	498097011	PS									
Manganese	500		960	1480	ug/L		105	(75%-125%)		12/09/19	12:52
QC1204447667	498097011	SDILT									
Aluminum			161000	35400	ug/L	10.2		(0%-20%)		12/06/19	18:44
Antimony		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Arsenic		J	25.2	J	7.68	ug/L	52.7	(0%-20%)			
Barium			839	180	ug/L	7.1		(0%-20%)			
Beryllium			10.3	J	2.13	ug/L	3.78	(0%-20%)			
Cadmium		U	ND	U	ND	ug/L	N/A	(0%-20%)			
Calcium			1040	J	236	ug/L	12.9	(0%-20%)		12/09/19	12:57
Chromium			199		43.0	ug/L	7.98	(0%-20%)		12/06/19	18:44
Cobalt			46.3		10.4	ug/L	12.2	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 11 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945551										
Copper		133		27.5	ug/L	3.31		(0%-20%)	TXT1	12/06/19	18:44
Iron		105000		23000	ug/L	9.96		(0%-20%)			
Lead		185		39.0	ug/L	5.26		(0%-20%)			
Magnesium		16000		3470	ug/L	8.74		(0%-20%)			
Manganese		960		208	ug/L	8.36		(0%-20%)			
Nickel		73.7		16.1	ug/L	9.38		(0%-20%)			
Potassium		7510		1570	ug/L	4.75		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/06/19	18:56
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium		510		107	ug/L	5		(0%-20%)		12/06/19	18:44
Zinc		307		67.7	ug/L	10.2		(0%-20%)			
<hr/>											
Batch	1945555										
QC1204447681	LCS										
Aluminum	5000			4730	ug/L		94.6	(80%-120%)	TXT1	12/06/19	16:37
Antimony	500			467	ug/L		93.5	(80%-120%)			
Arsenic	500			453	ug/L		90.6	(80%-120%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 12 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945555										
Barium	500			471	ug/L		94.3	(80%-120%)	TXT1	12/06/19	16:37
Beryllium	500			474	ug/L		94.8	(80%-120%)			
Cadmium	500			472	ug/L		94.4	(80%-120%)			
Calcium	5000			4780	ug/L		95.6	(80%-120%)			
Chromium	500			481	ug/L		96.1	(80%-120%)			
Cobalt	500			478	ug/L		95.6	(80%-120%)			
Copper	500			477	ug/L		95.5	(80%-120%)			
Iron	5000			4790	ug/L		95.8	(80%-120%)			
Lead	500			466	ug/L		93.2	(80%-120%)			
Magnesium	5000			4790	ug/L		95.8	(80%-120%)			
Manganese	500			472	ug/L		94.5	(80%-120%)			
Nickel	500			485	ug/L		97	(80%-120%)			
Potassium	5000			4640	ug/L		92.8	(80%-120%)			
Selenium	500			450	ug/L		90	(80%-120%)			
Silver	100			93.4	ug/L		93.4	(80%-120%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 13 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945555										
Sodium	5000			4610	ug/L		92.2	(80%-120%)	TXT1	12/06/19	16:37
Thallium	500			474	ug/L		94.9	(80%-120%)			
Vanadium	500			478	ug/L		95.6	(80%-120%)			
Zinc	500			466	ug/L		93.2	(80%-120%)			
QC1204447682	LCSD										
Aluminum	5000			4760	ug/L	0.717	95.2	(0%-20%)		12/06/19	16:40
Antimony	500			464	ug/L	0.646	92.9	(0%-20%)			
Arsenic	500			453	ug/L	0.0486	90.6	(0%-20%)			
Barium	500			473	ug/L	0.309	94.6	(0%-20%)			
Beryllium	500			477	ug/L	0.606	95.4	(0%-20%)			
Cadmium	500			472	ug/L	0.0805	94.4	(0%-20%)			
Calcium	5000			4800	ug/L	0.488	96.1	(0%-20%)			
Chromium	500			473	ug/L	1.57	94.6	(0%-20%)			
Cobalt	500			478	ug/L	0.00419	95.6	(0%-20%)			
Copper	500			480	ug/L	0.493	95.9	(0%-20%)			
Iron	5000			4770	ug/L	0.328	95.4	(0%-20%)			

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 14 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945555										
Lead	500			465	ug/L	0.275	93	(0%-20%)	TXT1	12/06/19	16:40
Magnesium	5000			4840	ug/L	0.918	96.7	(0%-20%)			
Manganese	500			472	ug/L	0.0233	94.5	(0%-20%)			
Nickel	500			475	ug/L	2.23	94.9	(0%-20%)			
Potassium	5000			4710	ug/L	1.4	94.1	(0%-20%)			
Selenium	500			449	ug/L	0.222	89.8	(0%-20%)			
Silver	100			93.8	ug/L	0.503	93.8	(0%-20%)			
Sodium	5000			4690	ug/L	1.75	93.8	(0%-20%)			
Thallium	500			475	ug/L	0.166	95	(0%-20%)			
Vanadium	500			480	ug/L	0.374	95.9	(0%-20%)			
Zinc	500			467	ug/L	0.189	93.4	(0%-20%)			
QC1204447680	MB										
Aluminum			U	ND	ug/L					12/06/19	16:33
Antimony			U	ND	ug/L						
Arsenic			U	ND	ug/L						
Barium			U	ND	ug/L						

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 15 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945555										
Beryllium			U	ND	ug/L				TXT1	12/06/19	16:33
Cadmium			U	ND	ug/L						
Calcium			U	ND	ug/L						
Chromium			J	2.21	ug/L						
Cobalt			U	ND	ug/L						
Copper			U	ND	ug/L						
Iron			U	ND	ug/L						
Lead			U	ND	ug/L						
Magnesium			U	ND	ug/L						
Manganese			U	ND	ug/L						
Nickel			U	ND	ug/L						
Potassium			U	ND	ug/L						
Selenium			U	ND	ug/L						
Silver			U	ND	ug/L						
Sodium			U	ND	ug/L						



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 498097

Page 16 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945555										
Thallium			U	ND	ug/L				TXT1	12/06/19	16:33
Vanadium			U	ND	ug/L						
Zinc			U	ND	ug/L						
QC1204447683 498097007 SDILT											
Aluminum	U	ND	U	ND	ug/L	N/A		(0%-20%)		12/06/19	16:46
Antimony	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Arsenic	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Barium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Beryllium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cadmium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Calcium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Chromium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Cobalt	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Copper	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Iron	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Lead	U	ND	U	ND	ug/L	N/A		(0%-20%)			

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## QC Summary

Workorder: 498097

Page 17 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch	1945555										
Magnesium	U	ND	U	ND	ug/L	N/A		(0%-20%)	TXT1	12/06/19	16:46
Manganese	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Nickel	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Potassium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Selenium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Silver	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Sodium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Thallium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Vanadium	U	ND	U	ND	ug/L	N/A		(0%-20%)			
Zinc	U	ND	U	ND	ug/L	N/A		(0%-20%)			
<hr/>											
Batch	1947080										
QC1204451332	LCS										
Sodium	478000			462000	ug/kg		96.6	(80%-120%)	LS	12/10/19	13:51
QC1204451331	MB										
Sodium			U	ND	ug/kg					12/10/19	13:48
QC1204451333	498097011 MS										
Sodium	926000	84100		909000	ug/kg		89	(75%-125%)		12/10/19	13:55
QC1204451334	498097011 MSD										
Sodium	853000	84100		899000	ug/kg	1.09	95.6	(0%-20%)		12/10/19	13:57

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## QC Summary

Workorder: 498097

Page 18 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-ICP</b>											
Batch 1947080											
QC1204451335	498097011	SDILT									
Sodium		439	J	96.1	ug/L	9.37		(0%-20%)	LS	12/10/19	14:00
<b>Metals Analysis-Mercury</b>											
Batch 1945742											
QC1204448131	496108001	DUP									
Mercury	U	ND	U	ND	ug/L	N/A			CW2	12/06/19	09:56
QC1204448127	LCS										
Mercury	2.00			2.03	ug/L		102	(80%-120%)		12/06/19	09:53
QC1204448126	MB										
Mercury			U	ND	ug/L					12/06/19	09:51
QC1204448132	496108001	MS									
Mercury	2.00	U	ND	1.94	ug/L		97.1	(75%-125%)		12/06/19	09:58
QC1204448133	496108001	SDILT									
Mercury	U	ND	U	ND	ug/L	N/A		(0%-10%)		12/06/19	09:59
Batch 1945748											
QC1204448147	498097011	DUP									
Mercury	J	76.6	J	78.7	ug/kg	2.61 ^		(+/-92.8)	CW2	12/06/19	10:55
QC1204448146	LCS										
Mercury	221			197	ug/kg		89.1	(80%-120%)		12/06/19	10:33
QC1204448145	MB										
Mercury			U	ND	ug/kg					12/06/19	10:31
QC1204448148	498097011	MS									
Mercury	401	J	76.6	432	ug/kg		88.6	(80%-120%)		12/06/19	10:57

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## QC Summary

Workorder: 498097

Page 19 of 20

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Metals Analysis-Mercury</b>											
Batch 1945748											
QC1204448149	498097011	SDILT									
Mercury	J	0.358	U	ND	ug/L	N/A		(0%-10%)	CW2	12/06/19	10:58
<b>Nutrient Analysis</b>											
Batch 1945071											
QC1204446624	497904007	DUP									
Nitrogen, Ammonia		0.102		0.0885	mg/L	14.2 ^		(+/-0.050)	KLP1	12/10/19	09:50
QC1204446623	LCS										
Nitrogen, Ammonia	1.00			0.922	mg/L		92.2	(90%-110%)		12/10/19	09:47
QC1204446622	MB										
Nitrogen, Ammonia			U	ND	mg/L					12/10/19	09:46
QC1204446625	497904007	MS									
Nitrogen, Ammonia	1.00	0.102		1.05	mg/L		94.8	(90%-110%)		12/10/19	09:51
Batch 1945285											
QC1204448987	498097011	DUP									
Nitrogen, Ammonia		321		383	mg/kg	17.8		(0%-20%)	KLP1	12/10/19	11:06
QC1204447096	LCS										
Nitrogen, Ammonia	50.0			48.9	mg/kg		97.8	(90%-110%)		12/10/19	10:24
QC1204447095	MB										
Nitrogen, Ammonia			J	0.975	mg/kg					12/10/19	10:19
QC1204448988	498097011	MS									
Nitrogen, Ammonia	79.3	321		440	mg/kg		N/A	(90%-110%)		12/10/19	11:07

**Notes:**

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 498097

Page 20 of 20

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
B											
E											
E											
FB											
H											
J											
J											
N											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
X											
Y											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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## QC Summary

Report Date: December 11, 2019

Page 1 of 4

Westinghouse Electric Company, LLC  
 PO Drawer R  
 Columbia, South Carolina

Contact: Ms. Cynthia Logsdon

Workorder: 498097

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1945391										
QC1204447353	LCS										
Pct Uranium-235				0.935	percent				MXS2	12/05/19	12:15
Uranium-233/234				11.6	pCi/L						
	Uncertainty			+/-1.20							
Uranium-235/236				0.776	pCi/L						
	Uncertainty			+/-0.354							
Uranium-238	13.6			12.8	pCi/L		93.7	(75%-125%)			
	Uncertainty			+/-1.25							
QC1204447354	LCSD										
Pct Uranium-235				0.682	percent	31.2				12/05/19	12:15
Uranium-233/234				13.9	pCi/L	17.8					
	Uncertainty			+/-1.51							
Uranium-235/236				0.668	pCi/L	14.9					
	Uncertainty			+/-0.386							
Uranium-238	13.6			15.1	pCi/L	16.7	111	(0%-20%)			
	Uncertainty			+/-1.57							
QC1204447352	MB										
Pct Uranium-235			U	0.00	percent					12/05/19	12:15
Uranium-233/234			U	0.0126	pCi/L						
	Uncertainty			+/-0.107							
Uranium-235/236			U	0.0665	pCi/L						
	Uncertainty			+/-0.131							
Uranium-238			U	0.108	pCi/L						
	Uncertainty			+/-0.136							

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## QC Summary

Workorder: 498097

Page 2 of 4

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	1945413										
QC1204447391	498097011 DUP										
Uranium-233/234		2.05		2.26	pCi/g	9.82		(0%-20%)	MXS2	12/07/19	08:57
	Uncertainty	+/-0.511		+/-0.500							
Uranium-235/236	U	-0.0281		0.104	pCi/g	78.6		N/A			
	Uncertainty	+/-0.0848		+/-0.137							
Uranium-238		1.74		1.58	pCi/g	10.1		(0%-20%)			
	Uncertainty	+/-0.468		+/-0.419							
QC1204447392	LCS										
Uranium-233/234				10.9	pCi/g					12/07/19	08:57
	Uncertainty			+/-1.06							
Uranium-235/236				0.547	pCi/g						
	Uncertainty			+/-0.272							
Uranium-238	12.1			10.8	pCi/g		89.3	(75%-125%)			
	Uncertainty			+/-1.05							
QC1204447390	MB										
Uranium-233/234			U	-0.0381	pCi/g					12/07/19	08:57
	Uncertainty			+/-0.0704							
Uranium-235/236			U	-0.0101	pCi/g						
	Uncertainty			+/-0.087							
Uranium-238			U	-0.0163	pCi/g						
	Uncertainty			+/-0.0722							
<b>Rad Liquid Scintillation</b>											
Batch	1945548										
QC1204447658	LCS										
Technetium-99	854			871	pCi/L		102	(75%-125%)	JJ3	12/10/19	05:15
	Uncertainty			+/-44.4							
QC1204447659	LCSD										
Technetium-99	854			671	pCi/L	26*	78.5	(0%-20%)		12/10/19	05:37
	Uncertainty			+/-40.2							
QC1204447656	MB										
Technetium-99			U	12.5	pCi/L					12/10/19	04:54
	Uncertainty			+/-23.3							

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## QC Summary

Workorder: 498097

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	1945561										
QC1204447697	498097011	DUP									
Technetium-99	U	6.19	U	2.84	pCi/g	N/A		N/A	JJ3	12/10/19	10:30
	Uncertainty	+/-23.5		+/-21.4							
QC1204447698	LCS										
Technetium-99	467			443	pCi/g		94.9	(75%-125%)		12/10/19	10:52
	Uncertainty			+/-25.9							
QC1204447696	MB										
Technetium-99			U	-0.0572	pCi/g					12/10/19	10:08
	Uncertainty			+/-14.5							

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- NI See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier



# GEL LABORATORIES LLC

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## QC Summary

Workorder: 498097

Page 4 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Y											
Other specific qualifiers were required to properly define the results. Consult case narrative.											
^											
RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.											
h											
Preparation or preservation holding time was exceeded											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 498097**

## **Metals**

**Product:** Determination of Metals by ICP

**Analytical Method:** SW846 3050B/6010D

**Analytical Procedure:** GL-MA-E-013 REV# 31

**Analytical Batch:** 1945551

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1945549

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447663	Method Blank (MB)ICP
1204447664	Laboratory Control Sample (LCS)
1204447667	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204447665	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204447666	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)
1204451031	498097011(SED-55 0"-6"PS) Post Spike (PS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Calibration Information**

#### **CRDL/PQL Requirements**

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

**Quality Control (QC) Information**

**Matrix Spike (MS/MSD) Recovery Statement**

The percent recoveries (%R) obtained from the MS/MSD analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The MS/MSD (See Below) did not meet the recommended quality control acceptance criteria for percent recoveries for the following applicable analyte. The post spike recovery was within the required control limits. This verifies the absence of a matrix interference in the post-spike digested sample. The recovery may be attributed to possible sample matrix interference and/or non-homogeneity.

Sample	Analyte	Value
1204447666 (SED-55 0"-6"MSD)	Manganese	73.6* (75%-125%)

**Technical Information**

**Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. Samples required dilutions in order to minimize suppression of silver and thallium due to matrix interferences. 498097001 (SED-51 6"-12"), 498097003 (SED-52 0"-6"), 498097004 (SED-52 6"-12"), 498097005 (SED-53 0"-6"), 498097008 (SED-56 6"-12"), 498097009 (SED-54 0"-6"), 498097010 (SED-54 6"-12"), 498097011 (SED-55 0"-6"), 498097012 (SED-55 6"-12"), 498097013 (SED-56 0"-6") and 498097014 (SED-56-DUP 0"-6"). Sample required dilution in order to minimize suppression of thallium due to matrix interferences. 498097002 (SED-51 0"-6"). Sample required dilution in order to minimize suppression of antimony, silver and thallium due to matrix interferences. 498097006 (SED-53 6"-12").

Analyte	498097									
	001	002	003	004	005	006	008	009	010	011
Antimony	1X	1X	1X	1X	1X	10X	1X	1X	1X	1X
Silver	10X	1X	10X	10X	10X	10X	10X	10X	10X	10X
Thallium	10X	10X	10X	10X	1X	10X	1X	10X	10X	10X

Analyte	498097		
	012	013	014
Silver	10X	10X	10X
Thallium	10X	10X	10X

**Product: Determination of Metals by ICP**

**Analytical Method: SW846 3005A/6010D**

**Analytical Procedure: GL-MA-E-013 REV# 31**

**Analytical Batch: 1945555**

**Preparation Method:** SW846 3005A  
**Preparation Procedure:** GL-MA-E-006 REV# 14  
**Preparation Batch:** 1945554

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097007	EB-01-112719
498097015	EB-01 120219
1204447680	Method Blank (MB)ICP
1204447681	Laboratory Control Sample (LCS)
1204447682	Laboratory Control Sample Duplicate (LCSD)
1204447683	498097007(EB-01-112719L) Serial Dilution (SD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Calibration Information**

**CRDL/PQL Requirements**

The PQL standard recoveries for SW846 6010C or 6010D met the control limits with the exception of potassium. Client sample concentrations were less than the MDL or greater than two times the PQL; therefore the data were not adversely affected.

**Quality Control (QC) Information**

**Laboratory Control Sample Duplicate (LCSD)**

An LCSD was used in place of matrix QC due to limited sample volume.

**Product: Determination of Metals by ICP**

**Analytical Method:** SW846 3050B/6010D  
**Analytical Procedure:** GL-MA-E-013 REV# 31  
**Analytical Batch:** 1947080

**Preparation Method:** SW846 3050B  
**Preparation Procedure:** GL-MA-E-009 REV# 28  
**Preparation Batch:** 1947079

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"

498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204451331	Method Blank (MB)ICP
1204451332	Laboratory Control Sample (LCS)
1204451335	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204451333	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204451334	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Product: Determination of Metals by ICP-MS**

**Analytical Method:** SW846 3050B/6020B

**Analytical Procedure:** GL-MA-E-014 REV# 33

**Analytical Batch:** 1945538

**Preparation Method:** SW846 3050B

**Preparation Procedure:** GL-MA-E-009 REV# 28

**Preparation Batch:** 1945537

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"

1204447624	Method Blank (MB)ICP-MS
1204447625	Laboratory Control Sample (LCS)
1204447653	Laboratory Control Sample (LCS)
1204447628	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204447626	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204447654	498097011(SED-55 0"-6"S) Matrix Spike (MS)
1204447627	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)
1204447655	498097011(SED-55 0"-6"SD) Matrix Spike Duplicate (MSD)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Calibration Information**

**ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

**Technical Information**

**Preparation/Analytical Method Verification**

Method SW-846 3050B is not a total digestion technique for most samples. It is a very strong acid digestion that will dissolve almost all elements that could become environmentally available. By design, elements bound in silicate structures are not normally dissolved by this procedure as they are not usually mobile in the environment.

**Sample Dilutions**

Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range. The ICPMS solid samples in this SDG were diluted the standard two times.

Analyte	498097									
	001	002	003	004	005	006	008	009	010	011
Uranium-234	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-235	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X
Uranium-238	2X	2X	2X	2X	2X	2X	2X	2X	2X	2X

Analyte	498097		
	012	013	014
Uranium-234	2X	2X	2X
Uranium-235	2X	2X	2X
Uranium-238	2X	2X	2X

**Product: Determination of Metals by ICP-MS**

**Analytical Method:** SW846 3010A/6020B

**Analytical Procedure:** GL-MA-E-014 REV# 33

**Analytical Batch:** 1945540

**Preparation Method:** SW846 3010A

**Preparation Procedure:** GL-MA-E-008 REV# 19

**Preparation Batch:** 1945539

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097007	EB-01-112719
498097015	EB-01 120219
1204447629	Method Blank (MB)ICP-MS
1204447630	Laboratory Control Sample (LCS)
1204447651	Laboratory Control Sample (LCS)
1204447631	Laboratory Control Sample Duplicate (LCSD)
1204447652	Laboratory Control Sample Duplicate (LCSD)
1204447632	497772015(EB-01-112219L) Serial Dilution (SD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Calibration Information**

**ICSA/ICSAB Statement**

For the ICP-MS analysis, the ICSA solution contains analyte concentrations which are verified trace impurities indigenous to the purchased standard.

**Quality Control (QC) Information**

**Laboratory Control Sample Duplicate (LCSD)**

An LCSD was used in place of matrix QC due to the designation of field QC.

**Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**

**Analytical Method:** SW846 7470A

**Analytical Procedure:** GL-MA-E-010 REV# 38

**Analytical Batch:** 1945742

**Preparation Method:** SW846 7470A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 38

**Preparation Batch:** 1945741

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097007	EB-01-112719
498097015	EB-01 120219
1204448126	Method Blank (MB)CVAA

1204448127	Laboratory Control Sample (LCS)
1204448133	496108001(NonSDGL) Serial Dilution (SD)
1204448131	496108001(NonSDGD) Sample Duplicate (DUP)
1204448132	496108001(NonSDGS) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Mercury Analysis Using the Perkin Elmer Automated Mercury Analyzer**

**Analytical Method:** SW846 7471A

**Analytical Procedure:** GL-MA-E-010 REV# 38

**Analytical Batch:** 1945748

**Preparation Method:** SW846 7471A Prep

**Preparation Procedure:** GL-MA-E-010 REV# 38

**Preparation Batch:** 1945746

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204448145	Method Blank (MB)CVAA
1204448146	Laboratory Control Sample (LCS)
1204448149	498097011(SED-55 0"-6"L) Serial Dilution (SD)
1204448147	498097011(SED-55 0"-6"D) Sample Duplicate (DUP)
1204448148	498097011(SED-55 0"-6"S) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.



# General Chemistry

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batch:** 1945533

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097007	EB-01-112719
498097015	EB-01 120219
1204447633	Method Blank (MB)
1204447634	Laboratory Control Sample (LCS)
1204447637	498037002(NonSDG) Sample Duplicate (DUP)
1204447638	498037002(NonSDG) Post Spike (PS)

The samples in this SDG were analyzed on an "as received" basis.

## **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

## **Quality Control (QC) Information**

### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

<b>Analyte</b>	<b>Sample</b>	<b>Value</b>
Fluoride	1204447638 (Non SDG 498037002PS)	89.2* (90%-110%)

## **Technical Information**

### **Sample Dilutions**

The following samples 1204447637 (Non SDG 498037002DUP) and 1204447638 (Non SDG 498037002PS) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batches:** 1945544 and 1945543

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
1204447647	Method Blank (MB)
1204447648	Laboratory Control Sample (LCS)
1204447649	498097001(SED-51 6"-12") Sample Duplicate (DUP)
1204447650	498097001(SED-51 6"-12") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204447650 (SED-51 6"-12"MS)	19.5* (75%-125%)

**Miscellaneous Information**

**Manual Integrations**

Samples 498097005 (SED-53 0"-6"), 498097006 (SED-53 6"-12"), 498097008 (SED-56 6"-12") and 498097009 (SED-54 0"-6") were manually integrated to correctly position the baseline as set in the calibration standards.

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batches:** 1945958 and 1945955

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
498097010	SED-54 6"-12"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"

1204448642	Method Blank (MB)
1204448643	Laboratory Control Sample (LCS)
1204448644	498097010(SED-54 6"-12") Sample Duplicate (DUP)
1204448645	498097010(SED-54 6"-12") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204448645 (SED-54 6"-12"MS)	20.6* (75%-125%)

**Miscellaneous Information**

**Manual Integrations**

Samples 498097013 (SED-56 0"-6") and 498097014 (SED-56-DUP 0"-6") were manually integrated to correctly position the baseline as set in the calibration standards.

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 27

**Analytical Batches:** 1946463 and 1946461

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097011	SED-55 0"-6"
1204449642	Method Blank (MB)
1204449643	Laboratory Control Sample (LCS)
1204451547	498097011(SED-55 0"-6") Sample Duplicate (DUP)
1204451548	498097011(SED-55 0"-6") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204451548 (SED-55 0"-6"MS)	26* (75%-125%)

**Miscellaneous Information**

**Manual Integrations**

Samples 1204451547 (SED-55 0"-6"DUP) and 498097011 (SED-55 0"-6") were manually integrated to correctly position the baseline as set in the calibration standards.

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1

**Preparation Procedure:** GL-GC-E-106 REV# 10

**Preparation Batch:** 1945071

**Preparation Method:** EPA 350.1 Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 1945070

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097007	EB-01-112719
498097015	EB-01 120219
1204446622	Method Blank (MB)
1204446623	Laboratory Control Sample (LCS)
1204446624	497904007(NonSDG) Sample Duplicate (DUP)
1204446625	497904007(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Ammonia Nitrogen**

**Preparation Method:** EPA 350.1 Modified

**Preparation Procedure:** GL-GC-E-106 REV# 10

**Preparation Batch:** 1945285

**Preparation Method:** EPA 350.2 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 1945284

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447095	Method Blank (MB)
1204447096	Laboratory Control Sample (LCS)
1204448987	498097011(SED-55 0"-6") Sample Duplicate (DUP)
1204448988	498097011(SED-55 0"-6") Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Sample Dilutions**

The following samples 1204448987 (SED-55 0"-6"DUP), 1204448988 (SED-55 0"-6"MS), 498097001 (SED-51 6"-12"), 498097002 (SED-51 0"-6"), 498097003 (SED-52 0"-6"), 498097004 (SED-52 6"-12"), 498097005 (SED-53 0"-6"), 498097006 (SED-53 6"-12"), 498097008 (SED-56 6"-12"), 498097009 (SED-54 0"-6"), 498097010 (SED-54 6"-12"), 498097011 (SED-55 0"-6"), 498097012 (SED-55 6"-12"), 498097013 (SED-56 0"-6") and 498097014 (SED-56-DUP 0"-6") were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	498097										
	001	002	003	004	005	006	008	009	010	011	
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	5X	

Analyte	498097		
	012	013	014
Nitrogen, Ammonia	5X	5X	5X

**Radiochemistry**

**Product:** Alphaspec U, Liquid

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 27

**Analytical Batch:** 1945391

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097007	EB-01-112719
498097015	EB-01 120219
1204447352	Method Blank (MB)
1204447353	Laboratory Control Sample (LCS)
1204447354	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Alphaspec U, Soil/Veg

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 27

**Analytical Batch:** 1945413

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 23

**Preparation Batch:** 1945402

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447390	Method Blank (MB)
1204447391	498097011(SED-55 0"-6") Sample Duplicate (DUP)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Recounts**

Sample 498097006 (SED-53 6"-12") was recounted due to poor resolution. The recount is reported.

**Miscellaneous Information**

**Additional Comments**

Sample 498097003 (SED-52 0"-6") did not meet the resolution requirement of having a full width half maximum of 100 keV or less for the tracer; however, the tracer yield requirement was met and the tracer peak is within the tracer region of interest. The tracer peak centroid for sample 498097003 (SED-52 0"-6") is greater than 50 keV from the expected library energy value for the tracer; however, the tracer yield requirement was met and the tracer peak is within the tracer region of interest.

**Product: Dry Weight**

**Analytical Method:** ASTM D 2216 (Modified)

**Analytical Procedure:** GL-OA-E-020 REV# 13

**Analytical Batch:** 1945402

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 23

**Preparation Batch:** 1945402

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447382	498097001(SED-51 6"-12") Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Liquid**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 1945548

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097007	EB-01-112719
498097015	EB-01 120219
1204447656	Method Blank (MB)
1204447658	Laboratory Control Sample (LCS)
1204447659	Laboratory Control Sample Duplicate (LCSD)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplication Criteria between LCS and LCSD**

The Laboratory Control Sample and Laboratory Control Sample Duplicate (See Below) do not meet the duplication requirement; however, they both meet the spiked recovery requirement.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204447658 (LCS) and 1204447659 (LCSD)	Technetium-99	RPD 26* (0%-20%)

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5



**Analytical Batch:** 1945561

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
498097001	SED-51 6"-12"
498097002	SED-51 0"-6"
498097003	SED-52 0"-6"
498097004	SED-52 6"-12"
498097005	SED-53 0"-6"
498097006	SED-53 6"-12"
498097008	SED-56 6"-12"
498097009	SED-54 0"-6"
498097010	SED-54 6"-12"
498097011	SED-55 0"-6"
498097012	SED-55 6"-12"
498097013	SED-56 0"-6"
498097014	SED-56-DUP 0"-6"
1204447696	Method Blank (MB)
1204447697	498097011(SED-55 0"-6") Sample Duplicate (DUP)
1204447698	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

# GEL Chain of Custody and Analytical Request

Project #: 60595649 of 2 pages  
 GEL Quote #: \_\_\_\_\_  
 QOC Number <sup>(1)</sup>: \_\_\_\_\_  
 PO Number: \_\_\_\_\_

**GEL Laboratories, LLC**  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

Client Name: WESTINGHOUSE  
 Project/Site Name: RI IMPLEMENTATION  
 Address: 5801 BLUFF RD WORKS SC  
 Collected by: JAMES LEAPHART Send Results To: DIANA JOYNER

Sample ID <small>* For composites - indicate start and stop date/time</small>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Sample Analysis Requested <sup>(5)</sup> (Fill in the number of containers for each test)						Comments Note: extra sample is required for sample specific QC							
						Should this sample be considered:		Total number of containers											
						Radioactive	TSCA Regulated	AMMO	FLUORIDE	TRC METALS	TOC METALS		ISOTOPE	ANALYTIC	AMMO/PC	SA	PI	NI	NI
SED-51 6:12"	11-27-19	1005	G	N	SD	2		X	X	X	X	X	X	X	X	X	X		
SED-51 0:26"		1000	G	2	SD	2		X	X	X	X	X	X	X	X	X	X		
SED-52 0:26"		1100	G	2	SD	2		X	X	X	X	X	X	X	X	X	X		
SED-52 6:12"		1105	G	2	SD	2		X	X	X	X	X	X	X	X	X	X		
SED-53 0:26"		1300	G	2	SA	2		X	X	X	X	X	X	X	X	X	X		
SED-53 6:12"		1305	G	2	SA	2		X	X	X	X	X	X	X	X	X	X		
GB-01-112719		1230	GB	2	L	2													
SED-56 6:12"	12-2-19	1130	G	2	SA	2		X	X	X	X	X	X	X	X	X	X		

TAT Requested: Normal: 12/14/19 Rush: X Specify: Results by 12/13/19 (Subject to Surcharges) Fax Results: Yes / No  
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Sample Collection Time Zone: Eastern Pacific Other  
 Central Mountain

**Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards**

**Chain of Custody Signatures**

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<u>J. Leaphart</u>	12-3-19	<u>J. Leaphart</u>	12/3/19	0846
<u>J. Leaphart</u>	12/4/19	<u>J. Leaphart</u>	12/4/19	1038
<u>J. Leaphart</u>	12/4/19	<u>J. Leaphart</u>	12/4/19	1038

GEL PM: \_\_\_\_\_ Date Shipped: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_

**Sample Shipping and Delivery Details**

For Lab Receiving Use Only  
 Custody Seal Intact? YES / NO  
 Cooler Temp: \_\_\_\_\_

1.) Chain of Custody Number = Chain Determined  
 2.) Codes: N = Not Applicable, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3.) Field Filtered: For liquid matrices, indicate with a -F- for the sample was field filtered or -N- for sample was not field filtered.  
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal  
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank  
**WHITE = LABORATORY YELLOW = FILE PINK = CLIENT**

# GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

GEL Work Order Number:

Page: 2 of 2  
 Project #: 60595649  
 GEL Quote #: \_\_\_\_\_  
 CQC Number (1): \_\_\_\_\_  
 PO Number: \_\_\_\_\_

Sample Analysis Requested (6) (Fill in the number of containers for each test)

Sample ID	Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (1)	Field Filtered (2)	Sample Matrix (3)	Sample Analysis Requested (6)						Total number of containers	Should this sample be considered: Radioactive	Comments
						Amazilia	Fluoride	Tar Metals	Tc 99	ISOTOPIC CONTAMINANTS	SA			
SED-54 0-6"	12-2-19	1105	G	2	SD	X	X	X	X	X	X	1	2	Note: extra sample is required for sample specific QC
SED-54 6-12"		1110	G	2	SD	X	X	X	X	X	X	1	2	
SED-55 0-6"		1115	G	2	SD	X	X	X	X	X	X	1	2	
SED-55-MS 0-6"		1115	G	2	SD	X	X	X	X	X	X	1	2	
SED-55-MSD 0-6"		1115	G	2	SD	X	X	X	X	X	X	1	2	
SED-55 6-12"		1120	G	2	SD	X	X	X	X	X	X	1	2	
SED-56 0-6"		1125	G	2	SD	X	X	X	X	X	X	1	2	
SED-56-DP 0-6"		1130	G	2	SD	X	X	X	X	X	X	1	2	
EB-01-120219		1235	EB	2	W							3	2	

TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_  
 Results by 12/13/19 (Subject to Surcharge) Fax Results: Yes / No  
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards

### Chain of Custody Signatures

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<i>[Signature]</i>	12-3-19	<i>[Signature]</i>	12/3/19	0846
<i>[Signature]</i>	12/4/19	<i>[Signature]</i>	12-14/19	1038
<i>[Signature]</i>	12/4/19	<i>[Signature]</i>	12/14/19	15:25

1.) Chain of Custody Number = Client Determined  
 2.) Codes: N = Normal Sample, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3.) Field Filtered: For liquid matrices, indicate with a -Y- for sample was field filtered or -N- for sample was not field filtered.  
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal  
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY

YELLOW = FILE

PINK = CLIENT

For Lab Receiving Use Only  
 Custody Seal Intact?  
 YES NO  
 Cooler Temp:  
 C

SAMPLE RECEIPT & REVIEW FORM

499 097

Client: <u>WVVC WVNCU #1215</u>		SDG/AR/COC/Work Order:	
Received By: <u>S BOONE</u>		Date Received: <u>12/4/19</u>	
Carrier and Tracking Number		Circle Applicable: FedEx Express   FedEx Ground   UPS   Field Services   Courier   Other	
Suspected Hazard Information		Yes	No
		*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.	
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/hr Classified as: Rad 1   Rad 2   Rad 3
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's   Flammable   Foreign Soil   RCRA   Asbestos   Beryllium   Other:
Sample Receipt Criteria		Yes	NA
		Yes	No
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	Comments/Qualifiers (Required for Non-Conforming Items) Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	Circle Applicable: Client contacted and provided COC   COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ deg. C)?*	<input checked="" type="checkbox"/>	Preservation Method: Wet Ice   Ice Packs   Dry Ice   None   Other: *all temperatures are recorded in Celsius
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>TR1-19</u> Secondary Temperature Device Serial # (If Applicable):
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer) Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No) Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8	Samples received within holding time?	<input checked="" type="checkbox"/>	ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	Circle Applicable: No dates on containers   No times on containers   COC missing info   Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	Circle Applicable: No container count on COC   Other (describe)
12	Are sample containers identifiable as GEL provided?	<input checked="" type="checkbox"/>	
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	Circle Applicable: Not relinquished   Other (describe)
Comments (Use Continuation Form if needed):			

PM (or PMA) review: Initials SH Date 12/5/19 Page 1 of 1

**List of current GEL Certifications as of 11 December 2019**

<b>State</b>	<b>Certification</b>
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122020-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-19-15
Utah NELAP	SC000122019-29
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



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## Report of Analysis

**Westinghouse Electric Company**  
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: CVOC

Lot Number: **VK10095**

Date Completed: 11/20/2020

11/23/2020 3:57 PM

Approved and released by:  
Project Manager I: **Blaire M. Gagne**



The electronic signature above is the equivalent of a handwritten signature.  
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# PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: VK10095

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 The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

### **Volatile Organic Analysis- Method 8260D**

Sample VK10095-003, and VK10095-004 had the surrogate Toluene-d8 recover above the acceptance limits. This reflects a high bias for compounds associated with this surrogate. There were no detections for these compounds in the sample; therefore, there is no impact on data quality and no corrective action is required.

The internal standard for VK10095-002, VK10095-008, and VK10095-011, was outside of the acceptance limits. All samples were re-analyzed yielding the same results. The internal standard recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

The internal standard for VK10095-009, VK10095-012, VK10095-013, VK10095-014, VK10095-015, VK10095-017 was outside of the acceptance limits. All samples were re-analyzed yielding the same results. The internal standard recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

# PACE ANALYTICAL SERVICES, LLC

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Sample Summary  
Westinghouse Electric Company  
Lot Number: VK10095  
Project Name: CVOC  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	Sed-22P2-0-6	Solid	11/09/2020 1510	11/10/2020
002	Sed-22P2-6-12	Solid	11/09/2020 1521	11/10/2020
003	Sed-22P2-12-24	Solid	11/09/2020 1530	11/10/2020
004	Sed-22P2-24-36	Solid	11/09/2020 1535	11/10/2020
005	SED-38P2-0-6	Solid	11/10/2020 1245	11/10/2020
006	SED-38P2-6-12	Solid	11/10/2020 1255	11/10/2020
007	SED-38P2-12-24	Solid	11/10/2020 1305	11/10/2020
008	SED-38P2-24-36	Solid	11/10/2020 1315	11/10/2020
009	SED-38P2-24-36-DUP	Solid	11/10/2020	11/10/2020
010	SED-21P2-0-6	Solid	11/10/2020 1620	11/10/2020
011	SED-21P2-6-12	Solid	11/10/2020 1630	11/10/2020
012	SED-21P2-12-24	Solid	11/10/2020 1640	11/10/2020
013	SED-21P2-24-36	Solid	11/10/2020 1650	11/10/2020
014	SED-41P2-0-6	Solid	11/10/2020 1730	11/10/2020
015	SED-41P2-6-12	Solid	11/10/2020 1740	11/10/2020
016	SED-41P2-12-24	Solid	11/10/2020 1750	11/10/2020
017	SED-41P2-24-36	Solid	11/10/2020 1800	11/10/2020

(17 samples)



# PACE ANALYTICAL SERVICES, LLC

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Detection Summary  
Westinghouse Electric Company  
Lot Number: VK10095  
Project Name: CVOC  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	Sed-22P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.60		mg/kg	7
005	SED-38P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.95		mg/kg	15
010	SED-21P2-0-6	Solid	Nitrate - N (soluble)	353.2	3.7		mg/kg	25
011	SED-21P2-6-12	Solid	Nitrate - N (soluble)	353.2	1.1		mg/kg	27
012	SED-21P2-12-24	Solid	Nitrate - N (soluble)	353.2	1.1		mg/kg	29
014	SED-41P2-0-6	Solid	Nitrate - N (soluble)	353.2	3.4		mg/kg	33
015	SED-41P2-6-12	Solid	Nitrate - N (soluble)	353.2	1.6		mg/kg	35
016	SED-41P2-12-24	Solid	Nitrate - N (soluble)	353.2	0.55		mg/kg	37
017	SED-41P2-24-36	Solid	Nitrate - N (soluble)	353.2	1.0		mg/kg	39

(9 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-001
Description: Sed-22P2-0-6	Matrix: Solid
Date Sampled: 11/09/2020 1510	% Solids: 37.1 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 0950	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.60	0.54	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)  
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-001
Description: Sed-22P2-0-6	Matrix: Solid
Date Sampled: 11/09/2020 1510	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 37.1 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/17/2020 0416	STM		73692	1.98

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		34	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		34	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		34	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		34	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		34	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		34	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		34	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		117	47-138
1,2-Dichloroethane-d4		105	53-142
Toluene-d8		120	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-002
Description: Sed-22P2-6-12	Matrix: Solid
Date Sampled: 11/09/2020 1521	% Solids: 41.2 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 0958	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.48	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-002
Description: Sed-22P2-6-12	Matrix: Solid
Date Sampled: 11/09/2020 1521	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 41.2 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/17/2020 0440	STM		73692	4.18

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		15	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		15	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		15	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		15	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		15	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		15	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		15	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		112	47-138
1,2-Dichloroethane-d4		109	53-142
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-003
Description: Sed-22P2-12-24	Matrix: Solid
Date Sampled: 11/09/2020 1530	% Solids: 71.0 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1000	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.28	mg/kg	1

---

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-003
Description: Sed-22P2-12-24	Matrix: Solid
Date Sampled: 11/09/2020 1530	% Solids: 71.0 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/17/2020 0503	STM		73692	6.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.6	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		5.6	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.6	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.6	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		5.6	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		5.6	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		5.6	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		126	47-138
1,2-Dichloroethane-d4		115	53-142
Toluene-d8	N	126	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-004
Description: Sed-22P2-24-36	Matrix: Solid
Date Sampled: 11/09/2020 1535	% Solids: 72.7 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1001	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.27	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

Pace Analytical Services, LLC (formerly Shealy Environmental Services, Inc.)  
 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com



# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-004
Description: Sed-22P2-24-36	Matrix: Solid
Date Sampled: 11/09/2020 1535	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 72.7 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/17/2020 0526	STM		73692	4.88

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		7.0	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		7.0	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.0	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.0	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		7.0	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		7.0	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		7.0	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		121	47-138
1,2-Dichloroethane-d4		115	53-142
Toluene-d8	N	129	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-005
Description: SED-38P2-0-6	Matrix: Solid
Date Sampled: 11/10/2020 1245	% Solids: 30.5 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1002	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.66	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-005
Description: SED-38P2-0-6	Matrix: Solid
Date Sampled: 11/10/2020 1245	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 30.5 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/17/2020 0550	STM		73692	4.64

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		18	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		18	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		18	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		18	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		18	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		18	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		18	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		113	47-138
1,2-Dichloroethane-d4		105	53-142
Toluene-d8		124	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-006
Description: SED-38P2-6-12	Matrix: Solid
Date Sampled: 11/10/2020 1255	% Solids: 29.4 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1004	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.68	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-006
Description: SED-38P2-6-12	Matrix: Solid
Date Sampled: 11/10/2020 1255	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 29.4 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/17/2020 0613	STM		73692	3.85

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		22	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		22	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		22	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		22	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		22	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		22	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		22	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		114	47-138
1,2-Dichloroethane-d4		110	53-142
Toluene-d8		122	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-007
Description: SED-38P2-12-24	Matrix: Solid
Date Sampled: 11/10/2020 1305	% Solids: 35.4 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1005	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.57	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-007
Description: SED-38P2-12-24	Matrix: Solid
Date Sampled: 11/10/2020 1305	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 35.4 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/17/2020 0637	STM		73692	1.71

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		41	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		41	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		41	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		41	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		41	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		41	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		41	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		115	47-138
1,2-Dichloroethane-d4		110	53-142
Toluene-d8		124	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-008
Description: SED-38P2-24-36	Matrix: Solid
Date Sampled: 11/10/2020 1315	% Solids: 60.1 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1006	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.33	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-008
Description: SED-38P2-24-36	Matrix: Solid
Date Sampled: 11/10/2020 1315	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 60.1 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/17/2020 0701	STM		73692	4.84

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		8.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		8.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		8.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		8.6	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		8.6	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		8.6	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		8.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		113	47-138
1,2-Dichloroethane-d4		117	53-142
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-009
Description: SED-38P2-24-36-DUP	Matrix: Solid
Date Sampled: 11/10/2020	% Solids: 54.4 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1008	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.37	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-009
Description: SED-38P2-24-36-DUP	Matrix: Solid
Date Sampled: 11/10/2020	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 54.4 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 0609	STM		73852	4.68

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		9.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		9.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		9.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		9.8	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		9.8	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		9.8	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		9.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		92	47-138
1,2-Dichloroethane-d4		91	53-142
Toluene-d8		124	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-010
Description: SED-21P2-0-6	Matrix: Solid
Date Sampled: 11/10/2020 1620	% Solids: 10.8 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1013	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		3.7	1.8	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-010
Description: SED-21P2-0-6	Matrix: Solid
Date Sampled: 11/10/2020 1620	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 10.8 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/18/2020 0632	STM		73852	4.28

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		54	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		54	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		54	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		54	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		54	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		54	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		54	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		94	47-138
1,2-Dichloroethane-d4		89	53-142
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-011
Description: SED-21P2-6-12	Matrix: Solid
Date Sampled: 11/10/2020 1630	% Solids: 27.0 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1014	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.74	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-011
Description: SED-21P2-6-12	Matrix: Solid
Date Sampled: 11/10/2020 1630	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 27.0 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/17/2020 0749	STM		73692	4.92

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		19	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		19	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		19	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		19	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		19	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		19	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		19	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		109	47-138
1,2-Dichloroethane-d4		107	53-142
Toluene-d8		119	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-012
Description: SED-21P2-12-24	Matrix: Solid
Date Sampled: 11/10/2020 1640	% Solids: 57.5 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1016	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		1.1	0.35	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-012
Description: SED-21P2-12-24	Matrix: Solid
Date Sampled: 11/10/2020 1640	% Solids: 57.5 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 0216	STM		73850	4.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		8.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		8.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		8.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		8.9	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		8.9	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		8.9	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		8.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		112	47-138
1,2-Dichloroethane-d4		114	53-142
Toluene-d8		122	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-013
Description: SED-21P2-24-36	Matrix: Solid
Date Sampled: 11/10/2020 1650	% Solids: 33.4 11/16/2020 0005
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1017	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.60	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-013
Description: SED-21P2-24-36	Matrix: Solid
Date Sampled: 11/10/2020 1650	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 33.4 11/16/2020 0005

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 0239	STM		73850	4.90

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		15	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		15	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		15	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		15	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		15	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		15	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		15	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		107	47-138
1,2-Dichloroethane-d4		121	53-142
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-014
Description: SED-41P2-0-6	Matrix: Solid
Date Sampled: 11/10/2020 1730	% Solids: 8.43 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1018	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		3.4	2.4	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-014
Description: SED-41P2-0-6	Matrix: Solid
Date Sampled: 11/10/2020 1730	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 8.43 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 0304	STM		73850	4.03

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		74	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		74	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		74	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		74	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		74	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		74	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		74	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		111	47-138
1,2-Dichloroethane-d4		109	53-142
Toluene-d8		122	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-015
Description: SED-41P2-6-12	Matrix: Solid
Date Sampled: 11/10/2020 1740	% Solids: 18.1 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1020	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		1.6	1.1	mg/kg 1

---

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-015
Description: SED-41P2-6-12	Matrix: Solid
Date Sampled: 11/10/2020 1740	Project Name: CVOC
Date Received: 11/10/2020	Project Number:
	% Solids: 18.1 11/14/2020 1842

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 0328	STM		73850	4.56

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		30	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		30	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		30	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		30	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		30	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		30	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		30	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		111	47-138
1,2-Dichloroethane-d4		113	53-142
Toluene-d8	N	127	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-016
Description: SED-41P2-12-24	Matrix: Solid
Date Sampled: 11/10/2020 1750	% Solids: 41.8 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1021	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.55	0.48	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-016
Description: SED-41P2-12-24	Matrix: Solid
Date Sampled: 11/10/2020 1750	% Solids: 41.8 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 0352	STM		73850	4.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		12	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		12	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		12	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		12	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		12	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		12	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		117	47-138
1,2-Dichloroethane-d4		110	53-142
Toluene-d8	N	129	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK10095-017
Description: SED-41P2-24-36	Matrix: Solid
Date Sampled: 11/10/2020 1800	% Solids: 30.0 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1029	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		1.0	0.67	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK10095-017
Description: SED-41P2-24-36	Matrix: Solid
Date Sampled: 11/10/2020 1800	% Solids: 30.0 11/14/2020 1842
Date Received: 11/10/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 0415	STM		73850	3.82

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		22	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		22	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		22	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		22	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		22	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		22	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		22	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		113	53-142
Toluene-d8		120	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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Chain of Custody  
and  
Miscellaneous Documents



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**Number** L13628

*Washinghouse*  
 Client **AECOM**

Address **101 Bessemer Dr.**  
 City **Columbia** State **SC** Zip Code **29203**

Project Name **Washinghouse**

Report to Contact **Jeremy Grant**  
 Sampler's Signature *Mike de Kozlowski*  
 Printed Name **Mike de Kozlowski**

Telephone No. / E-mail **Jeremy.Grant@pacelabs.com**  
 Analysis (Attach list if more spaces is needed)

Quote No. \_\_\_\_\_  
 Pages **1** of **3**



**VK10095**

NETS  
 Remarks / Cooler I.D.

Project No.	Sample ID / Description (Containers for which sample may be combined on one line)	Collection Date(s)	Collection Time (Military)	Matrix	No. of Containers by Preservation Type										Remarks / Cooler I.D.		
					C	D	E	F	G	H	I	J	K	L		M	
Sed-22P2-0-6		11/9/20	1510	X													
Sed-22P2-6-12		11/9/20	1521	X													
Sed-22P2-12-24		11/9/20	1530	X													
Sed-22P2-24-36		11/9/20	1535	X													
SED-38P2-0-6		11/10/20	1245	X													
SED-38P2-6-12		11/10/20	1255	X													
SED-38P2-12-24		11/10/20	1305	X													
SED-38P2-24-36		11/10/20	1315	X													
SED-38P2-24-36-DUP		11/10/20	--	X													

Turn Around Time Required (Prior lab approval required for expedited TAT):  
 Standard  Rush (Specify)

Sample Disposal:  
 Return to Client  Disposal by Lab

Requisitioned by: *Mike de Kozlowski*  
 Date: 11/10/20  
 Time: 2000

Requisitioned by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Requisitioned by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

Requisitioned by: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Time: \_\_\_\_\_

OC Requisitions (Specify):  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_

Requisitioned by: \_\_\_\_\_  
 Date: 11/10/20  
 Time: 2000  
 (Temp Blank)   N

LAB USE ONLY  
 Reported on Ice (City) Yes No Ice Pack Yes No  
 Receipt Term: *4.7* c

Note: All samples are retained for four weeks from receipt unless other arrangements are made.



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**Number**

113620

<b>Client</b> AECOM Address 101 Broadwater Dr City Columbia State SC Zip Code 29203 Project Name Washington base Project No.		<b>Report to Contact</b> Jeremy Grant Sampler's Signature x Mike duKozlowski Printed Name Mike duKozlowski		Telephone No. / E-mail jgrant@aecom.com / jgrant@aecom.com Analytical (Always list if more space is needed)		Quot's No. Page 2 of 2 Barcode VK10095 MMS Runners / Cooler ID.								
Sample ID / Description (Containers for each sample may be combined on one line)	P.O. No.	Collection Date/Time (Military)	Matrix				No. of Containers by Preservative Type				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			
			Asph	Soil	Water	Other	ECOH	ED	EDW	EDW				
SED-21P2-0-6	11/10/20	1620	X						4					
SED-21P2-6-12		1630							4					
SED-21P2-12-24		1640							4					
SED-21P2-24-36		1650							4					
SED-41P2-0-6		1730							4					
SED-41P2-6-12		1740							4					
SED-41P2-12-24		1750							4					
SED-41P2-12-24-AS		1750							4					
SED-41P2-12-24-MSD		1750							4					
SED-41P2-24-36		1800							4					
<b>Term Around Time Required (Prior lab approval required for expedited TAT.)</b> <input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)												<b>CG Requirements (Specify)</b> Date Time 11/16/20 2000 Date Time Date Time Date Time Date Time 2000 Date Time 2000		
<b>Requisitioned by</b> 1. Requisitioned by 2. Requisitioned by 3. Requisitioned by 4. Requisitioned by												Receipt Temp. °C 11/16/20 2000 11/16/20 2000		

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: MED0302-01



Samples Receipt Checklist (SRC) (ME0018C-15)  
Issuing Authority: Pace ENV - WCOL

Revised: 9/29/2020  
Page 1 of 1

Sample Receipt Checklist (SRC)

Client: AEOM

Cooler Inspected by/date: KBS / 11/10/2020

Lot #: VK10095

Means of receipt: <input type="checkbox"/> Pace <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt	%Solid Snap-Cup ID: 20-1438
4.7 / 4.7 °C 4.9 / 4.9 °C NA / NA °C NA / NA °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/pheno/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # 22261

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA

Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) with Shealy ID: NA

SR barcode labels applied by: KBS Date: 11/10/2020

Comments:

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## Report of Analysis

**Westinghouse Electric Company**  
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: CVOC

Lot Number: **VK11091**

Date Completed: 11/23/2020

11/24/2020 11:15 AM

Approved and released by:  
Project Manager I: **Blaire M. Gagne**



The electronic signature above is the equivalent of a handwritten signature.  
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# PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: VK11091

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 The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

The internal standard for VK11091-001, VK11091-002, VK11091-003, VK11091-004 were outside of the acceptance limits. All samples were re-analyzed yielding the same results. The internal standard recovery results are attributed to matrix interference. The associated sample results were reported and no corrective action was required.

# PACE ANALYTICAL SERVICES, LLC

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Sample Summary  
Westinghouse Electric Company  
Lot Number: VK11091  
Project Name: CVOC  
Project Number:

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Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-42P2-0-6	Solid	11/11/2020 0920	11/11/2020
002	SED-42P2-6-12	Solid	11/11/2020 0930	11/11/2020
003	SED-42P2-12-24	Solid	11/11/2020 0940	11/11/2020
004	SED-42P2-24-36	Solid	11/11/2020 0950	11/11/2020

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(4 samples)

# PACE ANALYTICAL SERVICES, LLC

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Detection Summary  
Westinghouse Electric Company  
Lot Number: VK11091  
Project Name: CVOC  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-42P2-0-6	Solid	Nitrate - N (soluble)	353.2	3.0		mg/kg	5
002	SED-42P2-6-12	Solid	Nitrate - N (soluble)	353.2	3.3		mg/kg	7

(2 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK11091-001
Description: SED-42P2-0-6	Matrix: Solid
Date Sampled: 11/11/2020 0920	Project Name: CVOC
Date Received: 11/11/2020	Project Number:
	% Solids: 11.6 11/12/2020 0023

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1030	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		3.0	1.7	mg/kg 1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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 106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.pacelabs.com

# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK11091-001
Description: SED-42P2-0-6	Matrix: Solid
Date Sampled: 11/11/2020 0920	Project Name: CVOC
Date Received: 11/11/2020	Project Number:
	% Solids: 11.6 11/12/2020 0023

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 1415	JM1		73904	3.55

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		61	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		61	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		61	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		61	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		61	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		61	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		61	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		110	47-138
1,2-Dichloroethane-d4		109	53-142
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK11091-002
Description: SED-42P2-6-12	Matrix: Solid
Date Sampled: 11/11/2020 0930	% Solids: 13.1 11/12/2020 0023
Date Received: 11/11/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/19/2020 1032	AMR		74101

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		3.3	1.5	mg/kg 1

---

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK11091-002
Description: SED-42P2-6-12	Matrix: Solid
Date Sampled: 11/11/2020 0930	Project Name: CVOC
Date Received: 11/11/2020	Project Number:
	% Solids: 13.1 11/12/2020 0023

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 1439	JM1		73904	3.90

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		49	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		49	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		49	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		49	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		49	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		49	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		49	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		108	47-138
1,2-Dichloroethane-d4		116	53-142
Toluene-d8		123	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK11091-003
Description: SED-42P2-12-24	Matrix: Solid
Date Sampled: 11/11/2020 0940	% Solids: 32.0 11/12/2020 0023
Date Received: 11/11/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/20/2020 1516	AMR		74306

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.63	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK11091-003
Description: SED-42P2-12-24	Matrix: Solid
Date Sampled: 11/11/2020 0940	Project Name: CVOC
Date Received: 11/11/2020	Project Number:
	% Solids: 32.0 11/12/2020 0023

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 1503	JM1		73904	3.80

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		21	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		21	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		21	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		21	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		21	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		21	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		21	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		113	47-138
1,2-Dichloroethane-d4		115	53-142
Toluene-d8		120	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK11091-004
Description: SED-42P2-24-36	Matrix: Solid
Date Sampled: 11/11/2020 0950	% Solids: 27.8 11/13/2020 0210
Date Received: 11/11/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/20/2020 1522	AMR		74306

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.72	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK11091-004
Description: SED-42P2-24-36	Matrix: Solid
Date Sampled: 11/11/2020 0950	Project Name: CVOC
Date Received: 11/11/2020	Project Number:
	% Solids: 27.8 11/13/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/18/2020 1527	JM1		73904	3.86

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		23	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		23	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		23	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		23	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		23	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		23	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		23	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		106	47-138
1,2-Dichloroethane-d4		115	53-142
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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Chain of Custody  
and  
Miscellaneous Documents



**PACE ANALYTICAL SERVICES, LLC**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.pacelabs.com

**Number** 113629

Client <b>AECOM</b>		Report to Contact <b>Jeremy Grant</b>		Telephone No. / Email <b>Jeremy.Grant@aecom.com</b>		Quote No.	
Address <b>101 Bessemer Dr.</b>		Signature <i>Mike de Kozlowski</i>		Analysis (Attach list if more space is needed)		Page <b>1</b> of <b>1</b>	
City <b>Columbia</b>		Printed Name <b>Mike de Kozlowski</b>		Barcode <b>VK11091</b>		GRW / Remarks / Cooler ID.	
State <b>SC</b>		Zip Code <b>29203</b>		Matrix			
Project Name <b>Washington</b>		P.O. No.		No. of Containers by Resonance Type			
Project No.		Collection Date		Matrix			
Sample ID / Description (Containers for each sample may be combined on one line.)		Collection Date		Matrix			
SED-42P2-0-6		11/11/20		G		1	
SED-42P2-6-12		11/11/20		G		1	
SED-42P2-12-24		11/11/20		G		1	
SED-42P2-24-36		11/11/20		G		1	
						* Did not find lab provided trip blank or temp. blank with sample materials	

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 type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison
1. Requisitioned by <b>Mike de Kozlowski</b>		Date	Time	1. Received by		Date	Time
2. Requisitioned by		11/11/20	1600	2. Received by			
3. Requisitioned by				3. Received by			
4. Requisitioned by				4. Laboratory receipt by <b>Mike Steeghs</b>		Date	Time
				LAB USE ONLY		11/11/20	1600
				Received on Ice (Circle) <input checked="" type="radio"/> Yes <input type="radio"/> No		Temp Blank	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
				Recept Temp.		61.2	°C

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

# PACE ANALYTICAL SERVICES, LLC



**Samples Receipt Checklist (SRC) (ME0018C-15)**  
Issuing Authority: Pace ENV - WCOL



1/2020  
1 of 1

## Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: KBS / 11/11/2020 Lot #: GRW

Means of receipt: <input checked="" type="checkbox"/> Pace <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>KBS</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>NA</u> <u>6.2 / 6.2</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: <u>phone (email) face-to-face</u> (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>22261</u>

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA.  
Time of preservation NA. If more than one preservative is needed, please note in the comments below.

Sample(s) NA were received with bubbles >6 mm in diameter.

Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>) with Shealy ID: NA.

SR barcode labels applied by: KBS Date: 11/11/2020

Comments:

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## Report of Analysis

**Westinghouse Electric Company**  
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: CVOC

Lot Number: **VK17078**

Date Completed: 11/30/2020  
Revision Date: 11/30/2020

11/30/2020 3:11 PM  
Approved and released by:  
Project Manager I: **Blaire M. Gagne**



The electronic signature above is the equivalent of a handwritten signature.  
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# PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## **Case Narrative Westinghouse Electric Company Lot Number: VK17078**

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 The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.



# PACE ANALYTICAL SERVICES, LLC

Sample Summary  
Westinghouse Electric Company  
Lot Number: VK17078  
Project Name: CVOC  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-23P2-24-36	Solid	11/16/2020 1245	11/17/2020
002	SED-23P2-12-24	Solid	11/16/2020 1255	11/17/2020
003	SED-23P2-6-12	Solid	11/16/2020 1305	11/17/2020
004	SED-23P2-0-6	Solid	11/16/2020 1315	11/17/2020
005	SED-24P2-0-6	Solid	11/16/2020 1445	11/17/2020
006	SED-24P2-6-12	Solid	11/16/2020 1435	11/17/2020
007	SED-24P2-12-18	Solid	11/16/2020 1425	11/17/2020
008	SED-65P2-0-6	Solid	11/16/2020 1635	11/17/2020
009	SED-65P2-6-12	Solid	11/16/2020 1645	11/17/2020
010	EB-01-111620	Aqueous	11/16/2020 1200	11/17/2020
011	SED-64P2-0-6	Solid	11/17/2020 1100	11/17/2020
012	SED-64P2-6-12	Solid	11/17/2020 1120	11/17/2020
013	SED-63P2-0-6	Solid	11/17/2020 1140	11/17/2020
014	SED-63P2-6-12	Solid	11/17/2020 1200	11/17/2020
015	SED-62P2-0-6	Solid	11/17/2020 1415	11/17/2020
016	SED-62P2-6-12	Solid	11/17/2020 1425	11/17/2020
017	SED-62P2-6-12-DUP	Solid	11/17/2020 1425	11/17/2020
018	SED-62P2-12-24	Solid	11/17/2020 1435	11/17/2020
019	TB-01-111720	Aqueous	11/17/2020	11/17/2020

(19 samples)

# PACE ANALYTICAL SERVICES, LLC

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Detection Summary  
Westinghouse Electric Company  
Lot Number: VK17078  
Project Name: CVOC  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
004	SED-23P2-0-6	Solid	Nitrate - N (soluble)	353.2	1.6		mg/kg	12
005	SED-24P2-0-6	Solid	Nitrate - N (soluble)	353.2	4.8		mg/kg	14
006	SED-24P2-6-12	Solid	Nitrate - N (soluble)	353.2	6.3		mg/kg	16
008	SED-65P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.47		mg/kg	20
011	SED-64P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.29		mg/kg	26
015	SED-62P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.51		mg/kg	34

(6 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-001
Description: SED-23P2-24-36	Matrix: Solid
Date Sampled: 11/16/2020 1245	% Solids: 76.5 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1429	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.26	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-001
Description: SED-23P2-24-36	Matrix: Solid
Date Sampled: 11/16/2020 1245	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 76.5 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1628	JM1		74081	6.28

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.2	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.2	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.2	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		123	47-138
1,2-Dichloroethane-d4		115	53-142
Toluene-d8		119	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-002
Description: SED-23P2-12-24	Matrix: Solid
Date Sampled: 11/16/2020 1255	% Solids: 76.7 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1433	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		ND	0.26	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-002
Description: SED-23P2-12-24	Matrix: Solid
Date Sampled: 11/16/2020 1255	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 76.7 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1651	JM1		74081	6.12

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.3	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.3	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.3	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		125	47-138
1,2-Dichloroethane-d4		114	53-142
Toluene-d8		117	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-003
Description: SED-23P2-6-12	Matrix: Solid
Date Sampled: 11/16/2020 1305	% Solids: 47.4 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1439	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.42	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-003
Description: SED-23P2-6-12	Matrix: Solid
Date Sampled: 11/16/2020 1305	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 47.4 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1715	JM1		74081	5.33

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		9.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		9.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		9.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		9.9	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		9.9	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		9.9	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		9.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		119	47-138
1,2-Dichloroethane-d4		107	53-142
Toluene-d8		115	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-004
Description: SED-23P2-0-6	Matrix: Solid
Date Sampled: 11/16/2020 1315	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 26.3 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1440	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	1.6	0.76	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-004
Description: SED-23P2-0-6	Matrix: Solid
Date Sampled: 11/16/2020 1315	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 26.3 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1738	JM1		74081	3.76

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		25	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		25	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		25	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		25	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		25	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		25	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		25	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		115	47-138
1,2-Dichloroethane-d4		109	53-142
Toluene-d8		119	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-005
Description: SED-24P2-0-6	Matrix: Solid
Date Sampled: 11/16/2020 1445	% Solids: 11.9 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1441	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	4.8	1.7	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-005
Description: SED-24P2-0-6	Matrix: Solid
Date Sampled: 11/16/2020 1445	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 11.9 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1802	JM1		74081	3.61

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		58	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		58	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		58	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		58	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		58	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		58	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		58	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		107	47-138
1,2-Dichloroethane-d4		103	53-142
Toluene-d8		113	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-006
Description: SED-24P2-6-12	Matrix: Solid
Date Sampled: 11/16/2020 1435	% Solids: 10.3 11/25/2020 0225
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1443	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	6.3	1.9	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-006
Description: SED-24P2-6-12	Matrix: Solid
Date Sampled: 11/16/2020 1435	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 10.3 11/25/2020 0225

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1826	JM1		74081	3.86

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		6.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		6.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		6.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		6.5	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		6.5	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		6.5	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		6.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		114	47-138
1,2-Dichloroethane-d4		107	53-142
Toluene-d8		112	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-007
Description: SED-24P2-12-18	Matrix: Solid
Date Sampled: 11/16/2020 1425	% Solids: 55.2 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1444	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.36	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-007
Description: SED-24P2-12-18	Matrix: Solid
Date Sampled: 11/16/2020 1425	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 55.2 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1850	JM1		74081	4.60

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		9.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		9.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		9.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		9.9	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		9.9	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		9.9	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		9.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		116	47-138
1,2-Dichloroethane-d4		115	53-142
Toluene-d8		116	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-008
Description: SED-65P2-0-6	Matrix: Solid
Date Sampled: 11/16/2020 1635	% Solids: 72.2 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1445	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	0.47	0.28	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-008
Description: SED-65P2-0-6	Matrix: Solid
Date Sampled: 11/16/2020 1635	Project Name: CVOC
Date Received: 11/17/2020	% Solids: 72.2 11/18/2020 0210
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/19/2020 1913	JM1		74081	6.38

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.4	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.4	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.4	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		123	47-138
1,2-Dichloroethane-d4		107	53-142
Toluene-d8		121	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-009
Description: SED-65P2-6-12	Matrix: Solid
Date Sampled: 11/16/2020 1645	% Solids: 78.2 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1447	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.26	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-009
Description: SED-65P2-6-12	Matrix: Solid
Date Sampled: 11/16/2020 1645	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 78.2 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/21/2020 0206	STM		74325	6.88

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		4.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.6	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.6	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		4.6	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		108	47-138
1,2-Dichloroethane-d4		87	53-142
Toluene-d8		102	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-010
Description: EB-01-111620	Matrix: Aqueous
Date Sampled: 11/16/2020 1200	Project Name: CVOC
Date Received: 11/17/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	11/18/2020 0000	SRB		73857

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N			353.2	ND	0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-010
Description: EB-01-111620	Matrix: Aqueous
Date Sampled: 11/16/2020 1200	Project Name: CVOC
Date Received: 11/17/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	11/26/2020 0033	DJG		74867

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260D	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260D	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260D	ND		1.0	ug/L	1
Vinyl chloride	75-01-4	8260D	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		109	70-130
1,2-Dichloroethane-d4		92	70-130
Toluene-d8		88	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-011
Description: SED-64P2-0-6	Matrix: Solid
Date Sampled: 11/17/2020 1100	% Solids: 68.1 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1448	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.29	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-011
Description: SED-64P2-0-6	Matrix: Solid
Date Sampled: 11/17/2020 1100	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 68.1 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/21/2020 0229	STM		74325	5.53

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		6.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		6.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		6.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		6.6	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		6.6	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		6.6	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		6.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		84	53-142
Toluene-d8		100	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-012
Description: SED-64P2-6-12	Matrix: Solid
Date Sampled: 11/17/2020 1120	% Solids: 78.9 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1449	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.25	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-012
Description: SED-64P2-6-12	Matrix: Solid
Date Sampled: 11/17/2020 1120	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 78.9 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/21/2020 0252	STM		74325	6.66

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		4.8	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.8	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.8	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.8	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.8	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		4.8	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.8	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		96	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-013
Description: SED-63P2-0-6	Matrix: Solid
Date Sampled: 11/17/2020 1140	% Solids: 71.1 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1455	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.28	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-013
Description: SED-63P2-0-6	Matrix: Solid
Date Sampled: 11/17/2020 1140	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 71.1 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/21/2020 0314	STM		74325	6.33

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.6	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.6	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.6	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		106	47-138
1,2-Dichloroethane-d4		86	53-142
Toluene-d8		98	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-014
Description: SED-63P2-6-12	Matrix: Solid
Date Sampled: 11/17/2020 1200	% Solids: 78.0 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1456	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.26	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-014
Description: SED-63P2-6-12	Matrix: Solid
Date Sampled: 11/17/2020 1200	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 78.0 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/21/2020 0337	STM		74325	6.37

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.0	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.0	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.0	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		106	47-138
1,2-Dichloroethane-d4		92	53-142
Toluene-d8		92	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-015
Description: SED-62P2-0-6	Matrix: Solid
Date Sampled: 11/17/2020 1415	% Solids: 44.9 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1457	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.51	0.45	mg/kg 1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-015
Description: SED-62P2-0-6	Matrix: Solid
Date Sampled: 11/17/2020 1415	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 44.9 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/21/2020 0400	STM		74325	6.26

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		8.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		8.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		8.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		8.9	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		8.9	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		8.9	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		8.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		95	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-016
Description: SED-62P2-6-12	Matrix: Solid
Date Sampled: 11/17/2020 1425	% Solids: 76.7 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1459	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.26	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-016
Description: SED-62P2-6-12	Matrix: Solid
Date Sampled: 11/17/2020 1425	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 76.7 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/20/2020 1323	JM1		74229	6.48

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.0	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.0	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.0	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		110	47-138
1,2-Dichloroethane-d4		92	53-142
Toluene-d8		104	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-017
Description: SED-62P2-6-12-DUP	Matrix: Solid
Date Sampled: 11/17/2020 1425	% Solids: 76.1 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1500	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.26	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-017
Description: SED-62P2-6-12-DUP	Matrix: Solid
Date Sampled: 11/17/2020 1425	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 76.1 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/20/2020 1346	JM1		74229	6.42

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.1	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.1	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.1	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		111	47-138
1,2-Dichloroethane-d4		94	53-142
Toluene-d8		106	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK17078-018
Description: SED-62P2-12-24	Matrix: Solid
Date Sampled: 11/17/2020 1435	% Solids: 77.9 11/18/2020 0210
Date Received: 11/17/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1501	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		ND	0.26	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-018
Description: SED-62P2-12-24	Matrix: Solid
Date Sampled: 11/17/2020 1435	Project Name: CVOC
Date Received: 11/17/2020	Project Number:
	% Solids: 77.9 11/18/2020 0210

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/20/2020 1408	JM1		74229	6.19

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.2	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.2	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.2	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		112	47-138
1,2-Dichloroethane-d4		94	53-142
Toluene-d8		107	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK17078-019
Description: TB-01-111720	Matrix: Aqueous
Date Sampled: 11/17/2020	Project Name: CVOC
Date Received: 11/17/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	11/26/2020 0057	DJG		74867

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260D	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260D	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260D	ND		1.0	ug/L	1
Vinyl chloride	75-01-4	8260D	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		112	70-130
1,2-Dichloroethane-d4		95	70-130
Toluene-d8		91	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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Chain of Custody  
and  
Miscellaneous Documents





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**Number** 13630

Client: <b>AECOM</b>		Report to Contact: <b>Jessy Grant</b>		Telephone No. / Email: <b>Jessy.Grant@aecom.com</b>		Quote No.	
Address: <b>101 Research Dr.</b>		Sampler's Signature: <i>[Signature]</i>		Analysis (Attach list if more space is needed)		Page 1 of 2	
City: <b>Columbia</b>		Printed Name: <b>Mike deKozlowski</b>		Lot # Bar Code: <b>VK17078</b>		GRW	
State: <b>SC</b>		Zip Code: <b>29203</b>		Matrix: <b>NO<sub>3</sub></b>		CVC's: <b>8260</b>	
Project Name: <b>Westinghouse</b>		Project No.:		No. of Contaminants by Preservative Type			
Sample ID / Description		Collection Time (Military)		NO <sub>3</sub>			
SED-23P2-24-36		11/16/20		1			
SED-23P2-24-36		11/16/20		1			
SED-23P2-6-12		11/16/20		1			
SED-23P2-0-6		11/16/20		1			
SED-24P2-0-6		11/16/20		1			
SED-24P2-6-12		11/16/20		1			
SED-24P2-12-18		11/16/20		1			
SED-65P2-0-6		11/16/20		1			
SED-65P2-0-12		11/16/20		1			
EB-01-11620		1200		3			
Sample Disposal		Possible Hazard Identification		DC Requirements (Specify)			
<input checked="" type="checkbox"/> Return to Client		<input checked="" type="checkbox"/> Disposal by Lab		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown			
1. Requisitioned by: <i>[Signature]</i>		Date: 11/17/20		Time: 1730		Date: Time	
2. Requisitioned by:		Date:		Time:		Date: Time	
3. Requisitioned by:		Date:		Time:		Date: Time	
4. Requisitioned by:		Date:		Time:		Date: Time	
Laboratory received by: <i>[Signature]</i>		Date: 11/17/20		Time: 1730		Temp Blank <input type="checkbox"/> Y <input type="checkbox"/> N	
LAD USE ONLY		Received on Ice (Circle) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Receptor Temp: <b>15.5</b> °C			

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

DISTRIBUTION: WHITE & YELLOW-RAMM to Laboratory with Sampler(s), PINK Fieldwork Copy  
 Document Number: AED0002-07



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**Number** 113631

Client: **AECOM**  
 Address: **101 Research Dr.**  
 City: **Columbia** State: **SC** Zip Code: **29203**  
 Project Name: **Westinghouse**  
 Project No.: \_\_\_\_\_  
 Report to Contact: **Jerry Grant**  
 Telephone No. / E-mail: **Jerry Grant @ aec.com**  
 Sample's Signature: *[Signature]*  
 Printed Name: **Mike de Kozlowski**  
 Quote No.: \_\_\_\_\_  
 Page **2** of **2**

Sample ID / Description (Containers for each sample may be combined on one line)	Collection Date/Time (M/D/Y)	R.O. No.	Matrix					No. of Containers by Preservative Type					Remarks / Container I.D.		
			Approx. Vol.	SW	AW	HW	HW	Direct	Other	Other	Other	Other			
SED-64P2-0-6	11/17/20	1100	X					4					1	X	
SED-64P2-6-12	11/17/20	1120	X					4					1	X	
SED-63P2-0-6	11/17/20	1140	X					4					1	X	
SED-63P2-6-12	11/17/20	1200	X					4					1	X	
SED-62P2-0-6	11/17/20	1415	X					4					1	X	
SED-62P2-6-12	11/17/20	1425	X					4					1	X	
SED-62P2-6-12-DUP	11/17/20	1425	X					4					1	X	
SED-62P2-12-24	11/17/20	1435	X					12					3	X	
TR-01-11720	--	--						2						X	MS/MSD

Sample Disposal:  Return to Client  Disposed by Lab

Possible Hazard Identification:  Non-Hazard  Flammable  Toxic  Infectious  Unknown

OC Requirements (Specify):

Date	Time	Date	Time
11/17/20	17:30		

1. Requisitioned by: *[Signature]*  
 2. Requisitioned by: \_\_\_\_\_  
 3. Requisitioned by: \_\_\_\_\_  
 4. Requisitioned by: \_\_\_\_\_

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

LAB USE ONLY  
 Received on ice (Circle)  No  Ice Pack  Recept Temp. **45** °C

DISTRIBUTION: WHITE & YELLOW: Return to laboratory with Sample(s); PINK: Field/Client Copy  
 Document Number: MED00292-01



**Samples Receipt Checklist (SRC) (ME0018C-15)**  
Issuing Authority: Pace ENV - WCOL

Revised: 9/29/2020  
Page 1 of 1

## Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: AHD / 11/17/2020

Lot #: VK17078

Means of receipt: <input checked="" type="checkbox"/> Pace <input type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 20-1438	
4.5 / 4.5 °C NA / NA °C NA / NA °C NA / NA °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: 5 IR Gun Correction Factor: 0 °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote #
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L. (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA	
SR barcode labels applied by: AHD Date: 11/17/2020	
Comments:	



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## Report of Analysis

**Westinghouse Electric Company**  
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: CVOC

Lot Number: **VK19086**

Date Completed: 12/02/2020  
Revision Date: 12/02/2020

12/02/2020 2:56 PM  
Approved and released by:  
Project Manager I: **Blaire M. Gagne**



The electronic signature above is the equivalent of a handwritten signature.  
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# PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: VK19086

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 The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

### **Nitrate Analysis- 353.2**

Sample VK19086-011 was analyzed outside of analytical holding time due to laboratory overlook. The sample was analyzed on 11/20/2020 at 0851. The sample expired on 11/20/2020 at 0800. Results will be reported and flagged accordingly.

# PACE ANALYTICAL SERVICES, LLC

Sample Summary  
Westinghouse Electric Company  
Lot Number: VK19086  
Project Name: CVOC  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-61P2-0-6	Solid	11/18/2020 1130	11/19/2020
002	SED-61P2-0-6 DUP	Solid	11/18/2020 1130	11/19/2020
003	SED-61P2-6-12	Solid	11/18/2020 1200	11/19/2020
004	SED-61P2-12-18	Solid	11/18/2020 1230	11/19/2020
005	SED-16P2-0-6	Solid	11/18/2020 1400	11/19/2020
006	SED-16P2-6-12	Solid	11/18/2020 1410	11/19/2020
007	SED-16P2-12-24	Solid	11/18/2020 1420	11/19/2020
008	SED-60P2-0-6	Solid	11/18/2020 1500	11/19/2020
009	SED-60P2-6-12	Solid	11/18/2020 1515	11/19/2020
010	TB-02-111820	Aqueous	11/18/2020	11/19/2020
011	EB-02-111820	Aqueous	11/18/2020 0800	11/19/2020
012	SED-40P2-0-6	Solid	11/19/2020 1030	11/19/2020
013	SED-40P2-6-12	Solid	11/19/2020 1040	11/19/2020
014	SED-40P2-12-24	Solid	11/19/2020 1050	11/19/2020
015	SED-40P2-24-36	Solid	11/19/2020 1100	11/19/2020
016	SED-39P2-0-6	Solid	11/19/2020 1130	11/19/2020
017	SED-39P2-6-12	Solid	11/19/2020 1140	11/19/2020
018	SED-39P2-12-24	Solid	11/19/2020 1150	11/19/2020
019	SED-39P2-24-36	Solid	11/19/2020 1200	11/19/2020
020	SED-20P2-0-6	Solid	11/19/2020 1600	11/19/2020
021	SED-20P2-6-12	Solid	11/19/2020 1615	11/19/2020
022	SED-20P2-12-24	Solid	11/19/2020 1630	11/19/2020
023	SED-20P2-24-36	Solid	11/19/2020 1700	11/19/2020

(23 samples)

# PACE ANALYTICAL SERVICES, LLC

Detection Summary  
Westinghouse Electric Company  
Lot Number: VK19086  
Project Name: CVOC  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-61P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.93		mg/kg	6
002	SED-61P2-0-6 DUP	Solid	Nitrate - N (soluble)	353.2	0.85		mg/kg	8
003	SED-61P2-6-12	Solid	Nitrate - N (soluble)	353.2	0.50		mg/kg	10
004	SED-61P2-12-18	Solid	Nitrate - N (soluble)	353.2	0.38		mg/kg	12
005	SED-16P2-0-6	Solid	Nitrate - N (soluble)	353.2	1.0		mg/kg	14
006	SED-16P2-6-12	Solid	Nitrate - N (soluble)	353.2	0.38		mg/kg	16
008	SED-60P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.27		mg/kg	20
009	SED-60P2-6-12	Solid	Nitrate - N (soluble)	353.2	0.29		mg/kg	22
012	SED-40P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.71		mg/kg	27
013	SED-40P2-6-12	Solid	Nitrate - N (soluble)	353.2	0.30		mg/kg	29
018	SED-39P2-12-24	Solid	Nitrate - N (soluble)	353.2	0.44		mg/kg	39
020	SED-20P2-0-6	Solid	Nitrate - N (soluble)	353.2	0.56		mg/kg	43
021	SED-20P2-6-12	Solid	Nitrate - N (soluble)	353.2	0.41		mg/kg	45
022	SED-20P2-12-24	Solid	Nitrate - N (soluble)	353.2	0.45		mg/kg	47
023	SED-20P2-24-36	Solid	Nitrate - N (soluble)	353.2	0.34		mg/kg	49

(15 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-001
Description: SED-61P2-0-6	Matrix: Solid
Date Sampled: 11/18/2020 1130	% Solids: 79.9 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1505	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	0.93	0.25	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-001
Description: SED-61P2-0-6	Matrix: Solid
Date Sampled: 11/18/2020 1130	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 79.9 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1100	JM1		74461	5.59

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.6	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.6	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.6	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.6	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		83	53-142
Toluene-d8		91	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-002
Description: SED-61P2-0-6 DUP	Matrix: Solid
Date Sampled: 11/18/2020 1130	% Solids: 75.5 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/24/2020 1511	AMR		74801

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.26	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-002
Description: SED-61P2-0-6 DUP	Matrix: Solid
Date Sampled: 11/18/2020 1130	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 75.5 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1123	JM1		74461	5.82

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.7	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.7	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.7	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.7	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.7	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.7	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		83	53-142
Toluene-d8		94	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-003
Description: SED-61P2-6-12	Matrix: Solid
Date Sampled: 11/18/2020 1200	% Solids: 88.2 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1646	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.50	0.23	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-003
Description: SED-61P2-6-12	Matrix: Solid
Date Sampled: 11/18/2020 1200	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 88.2 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1146	JM1		74461	5.64

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.0	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.0	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.0	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		102	47-138
1,2-Dichloroethane-d4		84	53-142
Toluene-d8		92	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-004
Description: SED-61P2-12-18	Matrix: Solid
Date Sampled: 11/18/2020 1230	% Solids: 85.8 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1654	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.38	0.23	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-004
Description: SED-61P2-12-18	Matrix: Solid
Date Sampled: 11/18/2020 1230	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 85.8 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1209	JM1		74461	6.64

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		4.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.4	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.4	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		4.4	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		105	47-138
1,2-Dichloroethane-d4		87	53-142
Toluene-d8		92	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-005
Description: SED-16P2-0-6	Matrix: Solid
Date Sampled: 11/18/2020 1400	% Solids: 78.1 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1658	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	1.0	0.26	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-005
Description: SED-16P2-0-6	Matrix: Solid
Date Sampled: 11/18/2020 1400	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 78.1 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1232	JM1		74461	6.06

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.3	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.3	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.3	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		94	47-138
1,2-Dichloroethane-d4		84	53-142
Toluene-d8		97	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-006
Description: SED-16P2-6-12	Matrix: Solid
Date Sampled: 11/18/2020 1410	% Solids: 77.4 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1814	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	0.38	0.26	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-006
Description: SED-16P2-6-12	Matrix: Solid
Date Sampled: 11/18/2020 1410	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 77.4 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/24/2020 1555	JM1		74626	6.50

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.0	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		5.0	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.0	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.0	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		5.0	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		5.0	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		5.0	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		84	53-142
Toluene-d8		95	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-007
Description: SED-16P2-12-24	Matrix: Solid
Date Sampled: 11/18/2020 1420	% Solids: 82.8 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1820	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.24	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-007
Description: SED-16P2-12-24	Matrix: Solid
Date Sampled: 11/18/2020 1420	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 82.8 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1317	JM1		74461	6.21

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		4.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.9	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.9	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		4.9	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		104	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		92	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-008
Description: SED-60P2-0-6	Matrix: Solid
Date Sampled: 11/18/2020 1500	% Solids: 82.0 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1821	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	0.27	0.24	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-008
Description: SED-60P2-0-6	Matrix: Solid
Date Sampled: 11/18/2020 1500	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 82.0 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1340	JM1		74461	6.28

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		4.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.9	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.9	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		4.9	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.9	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		102	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		94	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-009
Description: SED-60P2-6-12	Matrix: Solid
Date Sampled: 11/18/2020 1515	% Solids: 83.7 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1707	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.29	0.24	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-009
Description: SED-60P2-6-12	Matrix: Solid
Date Sampled: 11/18/2020 1515	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 83.7 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1403	JM1		74461	5.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.1	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.1	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.1	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		86	47-138
1,2-Dichloroethane-d4		87	53-142
Toluene-d8		110	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-010
Description: TB-02-111820	Matrix: Aqueous
Date Sampled: 11/18/2020	Project Name: CVOC
Date Received: 11/19/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	12/01/2020 0458	STM		75066

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260D	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260D	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260D	ND		1.0	ug/L	1
Vinyl chloride	75-01-4	8260D	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		104	70-130
1,2-Dichloroethane-d4		96	70-130
Toluene-d8		94	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-011
Description: EB-02-111820	Matrix: Aqueous
Date Sampled: 11/18/2020 0800	Project Name: CVOC
Date Received: 11/19/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	11/20/2020 0851	MSG		74321

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N			353.2	ND	H	0.020	mg/L 1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-011
Description: EB-02-111820	Matrix: Aqueous
Date Sampled: 11/18/2020 0800	Project Name: CVOC
Date Received: 11/19/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	12/01/2020 0434	STM		75066

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260D	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260D	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260D	ND		1.0	ug/L	1
Vinyl chloride	75-01-4	8260D	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		109	70-130
1,2-Dichloroethane-d4		100	70-130
Toluene-d8		98	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-012
Description: SED-40P2-0-6	Matrix: Solid
Date Sampled: 11/19/2020 1030	% Solids: 30.7 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1709	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	0.71	0.65	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-012
Description: SED-40P2-0-6	Matrix: Solid
Date Sampled: 11/19/2020 1030	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 30.7 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1426	JM1		74461	4.32

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		19	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		19	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		19	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		19	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		19	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		19	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		19	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		85	47-138
1,2-Dichloroethane-d4		83	53-142
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-013
Description: SED-40P2-6-12	Matrix: Solid
Date Sampled: 11/19/2020 1040	% Solids: 66.8 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1710	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.30	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-013
Description: SED-40P2-6-12	Matrix: Solid
Date Sampled: 11/19/2020 1040	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 66.8 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1449	JM1		74461	5.11

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		7.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		7.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.3	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		7.3	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		7.3	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		7.3	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		99	47-138
1,2-Dichloroethane-d4		83	53-142
Toluene-d8		95	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-014
Description: SED-40P2-12-24	Matrix: Solid
Date Sampled: 11/19/2020 1050	% Solids: 68.5 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1712	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.29	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-014
Description: SED-40P2-12-24	Matrix: Solid
Date Sampled: 11/19/2020 1050	% Solids: 68.5 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/24/2020 1641	JM1		74626	5.56

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		6.6	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		6.6	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		6.6	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		6.6	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		6.6	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		6.6	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		6.6	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		97	47-138
1,2-Dichloroethane-d4		83	53-142
Toluene-d8		97	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-015
Description: SED-40P2-24-36	Matrix: Solid
Date Sampled: 11/19/2020 1100	% Solids: 75.9 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1713	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.26	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-015
Description: SED-40P2-24-36	Matrix: Solid
Date Sampled: 11/19/2020 1100	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 75.9 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1535	JM1		74461	6.04

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		5.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.5	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.5	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.5	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		93	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-016
Description: SED-39P2-0-6	Matrix: Solid
Date Sampled: 11/19/2020 1130	% Solids: 56.1 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1714	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.36	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-016
Description: SED-39P2-0-6	Matrix: Solid
Date Sampled: 11/19/2020 1130	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 56.1 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/24/2020 1704	JM1		74626	5.10

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		8.7	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		8.7	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		8.7	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		8.7	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		8.7	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		8.7	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		8.7	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		91	47-138
1,2-Dichloroethane-d4		82	53-142
Toluene-d8		101	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-017
Description: SED-39P2-6-12	Matrix: Solid
Date Sampled: 11/19/2020 1140	% Solids: 57.2 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1716	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.35	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-017
Description: SED-39P2-6-12	Matrix: Solid
Date Sampled: 11/19/2020 1140	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 57.2 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	11/24/2020 1727	JM1		74626	4.37

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		10	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		10	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		10	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		10	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		10	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		10	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		10	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		82	47-138
1,2-Dichloroethane-d4		79	53-142
Toluene-d8		101	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-018
Description: SED-39P2-12-24	Matrix: Solid
Date Sampled: 11/19/2020 1150	% Solids: 67.4 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1717	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.44	0.30	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-018
Description: SED-39P2-12-24	Matrix: Solid
Date Sampled: 11/19/2020 1150	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 67.4 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1644	JM1		74461	5.24

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		7.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		7.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.1	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		7.1	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		7.1	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		7.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		101	47-138
1,2-Dichloroethane-d4		82	53-142
Toluene-d8		96	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-019
Description: SED-39P2-24-36	Matrix: Solid
Date Sampled: 11/19/2020 1200	% Solids: 67.8 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1822	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		0.30	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-019
Description: SED-39P2-24-36	Matrix: Solid
Date Sampled: 11/19/2020 1200	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 67.8 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1707	JM1		74461	5.97

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		6.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		6.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		6.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		6.2	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		6.2	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		6.2	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		6.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		100	47-138
1,2-Dichloroethane-d4		81	53-142
Toluene-d8		94	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-020
Description: SED-20P2-0-6	Matrix: Solid
Date Sampled: 11/19/2020 1600	% Solids: 57.6 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1724	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.56	0.35	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-020
Description: SED-20P2-0-6	Matrix: Solid
Date Sampled: 11/19/2020 1600	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 57.6 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1730	JM1		74461	5.31

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		8.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		8.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		8.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		8.2	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		8.2	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		8.2	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		8.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		99	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		97	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-021
Description: SED-20P2-6-12	Matrix: Solid
Date Sampled: 11/19/2020 1615	% Solids: 65.0 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1725	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.41	0.31	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-021
Description: SED-20P2-6-12	Matrix: Solid
Date Sampled: 11/19/2020 1615	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 65.0 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1752	JM1		74461	5.19

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		7.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		7.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.4	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		7.4	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		7.4	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		7.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		86	53-142
Toluene-d8		92	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-022
Description: SED-20P2-12-24	Matrix: Solid
Date Sampled: 11/19/2020 1630	% Solids: 67.8 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1726	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	0.45	0.29	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-022
Description: SED-20P2-12-24	Matrix: Solid
Date Sampled: 11/19/2020 1630	% Solids: 67.8 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/23/2020 1815	JM1		74461	5.27

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		7.0	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		7.0	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.0	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.0	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		7.0	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		7.0	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		7.0	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		98	47-138
1,2-Dichloroethane-d4		81	53-142
Toluene-d8		96	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VK19086-023
Description: SED-20P2-24-36	Matrix: Solid
Date Sampled: 11/19/2020 1700	% Solids: 68.2 11/21/2020 0052
Date Received: 11/19/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	11/25/2020 1728	AMR		74844

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		0.34	0.29	mg/kg 1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VK19086-023
Description: SED-20P2-24-36	Matrix: Solid
Date Sampled: 11/19/2020 1700	Project Name: CVOC
Date Received: 11/19/2020	Project Number:
	% Solids: 68.2 11/21/2020 0052

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	11/24/2020 1244	JM1		74626	5.74

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		6.4	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		6.4	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		6.4	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		6.4	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		6.4	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		6.4	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		6.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		100	47-138
1,2-Dichloroethane-d4		84	53-142
Toluene-d8		95	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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Chain of Custody  
and  
Miscellaneous Documents



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**Number** 113619

Client <b>AECOM</b>		Report to Contact <b>James G. Grant</b>		Telephone No. / E-mail <b>James.G.Grant@aec.com</b>		Quote No.	
Address <b>101 Rosewood Dr. Columbia SC 29203</b>		Submitter's Signature <i>Mike de Kozlowski</i>		Analysis (Attach list if more space is needed)		Page 1 of 3	
Project Name <b>Washington</b>		Printed Name <b>Mike de Kozlowski</b>		Barcode <b>VK19086</b>		ETIC <b>VK19086</b>	
Project No.		P.O. No.		Collection Date(s)		Remarks / Cooler I.D.	
Sample ID / Description (Containers for each sample may be combined on one line.)		Collection Time (HH:MM)		Matrix		No. of Containers by Preservative Type	
				Asst. No.		NO <sub>3</sub>	
SED-G1P2-0-6		11/18/20		X		2	
SED-G1P2-0-12		11/18/20		X		3	
SED-G1P2-12-18		11/18/20		X		1	
SED-16P2-0-6		11/18/20		X		1	
SED-16P2-0-12		11/18/20		X		1	
SED-16P2-12-24		11/18/20		X		1	
SED-60P2-0-6		11/18/20		X		1	
SED-60P2-0-6		11/18/20		X		1	
TB-02-111820		11/18/20		X		2	
EB-02-111820		11/18/20		X		3	
Turn Around Time Required (P) or 180 approval required for expedient TAT.		Sample Disposal		Possible Hazard Identification		CC Requirements (Specify)	
X Standard <input type="checkbox"/> RUSH (Specify)		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Dispose by Lab		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		Date	
1. Requisitioned by <i>Mike de Kozlowski</i>		Date 11/19/20		Time 1755		Date	
2. Requisitioned by		Date		Time		Date	
3. Requisitioned by		Date		Time		Date	
4. Requisitioned by		Date		Time		Date	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAD USE ONLY		Received on (Date)		Received Temp. <b>2.8</b> °C	
		Received by		No. Ice Pack		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	

Document Number: ME00302-01

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Cient Copy



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**Number** L13632

Client <b>MECOA</b>		Request to Contact <b>Jenny Grant</b>		Telephone No. / E-mail <b>Jenny.Grant@mecoa.com</b>		Quote No.	
Address <b>101 Reservoir Dr</b>		Signature <i>[Signature]</i>		Analysis (Attach for if more space is required)		Page <b>2</b> of <b>3</b>	
City <b>Columbia</b>		Printed Name <b>Milce de Fozlowski</b>		Barcode <b>VK19086</b>		Lot # Bar Code (not use only)	
State <b>SC</b>		Zip Code <b>29203</b>		Matrix		BIBO	
Project Name <b>Wastewater</b>		Project No.		No. of Containers by Preservative Type		OC Requirements (Specify)	
Sample ID / Description (Containers for each sample may be combined on one line.)		Collection Date (M/D/Y)		Collection Time (Military)		Date	
SED-40P2-0-6		11/19/20		1030		Time	
SED-40P2-6-12				1040		Time	
SED-40P2-12-24				1050		Time	
SED-40P2-24-36				1100		Time	
SED-39P2-0-6				1130		Time	
SED-39P2-6-12				1140		Time	
SED-39P2-12-24				1150		Time	
SED-39P2-24-36				1200		Time	
SED-30P2-0-6				1600		Time	
SED-20P2-6-12				1615		Time	
Turn Around Time Required (Prior lab approval required for expedited lab.)		Samples Disposed		Possible Hazard Identification		Date	
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify)		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown		Date	
1. Requisitioned by <i>[Signature]</i>		Date 11/19/20		Time 1755		Date	
2. Requisitioned by		Date		Time		Date	
3. Requisitioned by		Date		Time		Date	
4. Requisitioned by		Date		Time		Date	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY		Received on Ice (Circle)		Receipt Temp. <b>2.8</b> °C	
		No. ice Pack		Temp Blank		DY <input type="checkbox"/> N <input type="checkbox"/>	

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy  
 Document Number: MEC03M2-07



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**Number** L13670

<b>Client</b> ACEC 161 Research Dr. Columbia Project Name: Westinghouse Project No.			<b>Report to Contact</b> Jeremy Grant Sampler's Signature x <i>[Signature]</i> Printed Name: Mike de Kozlowski			<b>Telephone No. / Email</b> Jeremy Grant Analysts (Attach list if more space is needed)			<b>Quote No.</b> Page 3 of 3 Lot # Bar Code (lab use only) VK19086 RMG		
State: SC Zip Code: 29203	P.O. No.	Matrix	No. of Containers by Preserve Type 505 ML 100 ML 200 ML 500 ML 1000 ML	Method 1. K 2. X 3. X	Collection Time (M:PM) 1630 1700	Sample ID / Description (Containers for each sample may be combined on one line.) SED-20 P2-12-24 SED-20 P2-24-32	Collection Date (M/D/Y) 11/19/20 11/19/20	Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poisons <input type="checkbox"/> Unknown	GC Requirements (Specify) Date Time	Date Time	
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"/> Disposal by (M)	1. Received by Date: 11/19/20 Time: 1755	2. Received by Date: _____ Time: _____	3. Received by Date: _____ Time: _____	4. Laboratory received by Date: 11/19/20 Time: 1755	LAB USE ONLY Received on ice (Check) <input type="checkbox"/> No <input checked="" type="checkbox"/> Ice Pack <input type="checkbox"/> Needal Temp. _____ °C	Temp Blank <input checked="" type="checkbox"/> <input type="checkbox"/> N	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: NE030W2-01	





**Samples Receipt Checklist (SRC) (ME0018C-15)**  
 Issuing Authority: Pace ENV - WCOL

Revised: 9/29/2020  
 Page 1 of 1

## Sample Receipt Checklist (SRC)

Client: AECOM Cooler Inspected by/date: AHD / 11/19/2020 Lot #: VK19086

Means of receipt: <input type="checkbox"/> Pace <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>20-2963</u> Chlorine Strip ID: <u>20-2904</u> Tested by: <u>AHD</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>20-1438</u>	
<u>2.8 / 2.8</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C <u>NA / NA</u> °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input 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"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within 1/2 the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (1/4" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # <u>22261</u>
<b>Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)</b>	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH using SR # <u>NA</u>	
Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Sample(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is <b>no</b> ) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: <u>NA</u>	
SR barcode labels applied by: <u>JSH</u> Date: <u>11/19/2020</u>	

Comments:

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## Report of Analysis

**Westinghouse Electric Company**  
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: CVOC

Lot Number: **VL02096**

Date Completed: 12/16/2020

12/18/2020 10:30 AM  
Approved and released by:  
Project Manager I: **Blaire M. Gagne**



The electronic signature above is the equivalent of a handwritten signature.  
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# PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: VL02096

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 The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

### **Volatile Organic Analysis- Method 8260D**

Sample VL02096-006 had the surrogate recovery outside of the acceptance limits due to confirmed matrix interference.

# PACE ANALYTICAL SERVICES, LLC

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Sample Summary  
Westinghouse Electric Company  
Lot Number: VL02096  
Project Name: CVOC  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-44P2-0-6	Solid	12/01/2020 1115	12/02/2020
002	SED-44P2-6-12	Solid	12/01/2020 1130	12/02/2020
003	SED-44P2-12-18	Solid	12/01/2020 1145	12/02/2020
004	SED-43P2-0-6	Solid	12/01/2020 1500	12/02/2020
005	SED-43P2-6-12	Solid	12/01/2020 1530	12/02/2020
006	SED-46P2-0-6	Solid	12/02/2020 1330	12/02/2020
007	SED-46P2-6-12	Solid	12/02/2020 1400	12/02/2020
008	SED-45P2-0-6	Solid	12/02/2020 1415	12/02/2020
009	SED-45P2-6-12	Solid	12/02/2020 1500	12/02/2020
010	TB-01-120220	Aqueous	12/02/2020	12/02/2020
011	SED-19P2-0-6	Solid	12/02/2020 1530	12/02/2020
012	SED-19P2-6-12	Solid	12/02/2020 1550	12/02/2020
013	SED-19P2-12-18	Solid	12/02/2020 1610	12/02/2020
014	SED-19P2-12-18-DUP	Solid	12/02/2020 1610	12/02/2020

(14 samples)

# PACE ANALYTICAL SERVICES, LLC

Detection Summary  
Westinghouse Electric Company  
Lot Number: VL02096  
Project Name: CVOC  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-44P2-0-6	Solid	Nitrate - N (soluble)	353.2	4.6		mg/kg	6
002	SED-44P2-6-12	Solid	Nitrate - N (soluble)	353.2	2.1		mg/kg	8
004	SED-43P2-0-6	Solid	Nitrate - N (soluble)	353.2	1.9		mg/kg	12
005	SED-43P2-6-12	Solid	Nitrate - N (soluble)	353.2	4.9		mg/kg	14
006	SED-46P2-0-6	Solid	Nitrate - N (soluble)	353.2	5.0		mg/kg	16
007	SED-46P2-6-12	Solid	Nitrate - N (soluble)	353.2	1.8		mg/kg	18
008	SED-45P2-0-6	Solid	Nitrate - N (soluble)	353.2	2.7		mg/kg	20
009	SED-45P2-6-12	Solid	Nitrate - N (soluble)	353.2	1.4		mg/kg	22
011	SED-19P2-0-6	Solid	Nitrate - N (soluble)	353.2	4.2		mg/kg	25
012	SED-19P2-6-12	Solid	Nitrate - N (soluble)	353.2	3.7		mg/kg	27
013	SED-19P2-12-18	Solid	Nitrate - N (soluble)	353.2	2.1		mg/kg	29
014	SED-19P2-12-18-DUP	Solid	Nitrate - N (soluble)	353.2	1.8		mg/kg	31

(12 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-001
Description: SED-44P2-0-6	Matrix: Solid
Date Sampled: 12/01/2020 1115	% Solids: 6.76 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 1944	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		4.6	3.0	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-001
Description: SED-44P2-0-6	Matrix: Solid
Date Sampled: 12/01/2020 1115	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 6.76 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/11/2020 2347	STM		76349	3.65

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		100	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		100	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		100	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		100	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		100	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		100	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		100	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		90	47-138
1,2-Dichloroethane-d4		86	53-142
Toluene-d8		119	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-002
Description: SED-44P2-6-12	Matrix: Solid
Date Sampled: 12/01/2020 1130	% Solids: 13.8 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 1948	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		2.1	1.5	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-002
Description: SED-44P2-6-12	Matrix: Solid
Date Sampled: 12/01/2020 1130	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 13.8 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/12/2020 0010	STM		76349	3.83

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		47	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		47	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		47	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		47	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		47	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		47	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		47	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		87	47-138
1,2-Dichloroethane-d4		84	53-142
Toluene-d8		123	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-003
Description: SED-44P2-12-18	Matrix: Solid
Date Sampled: 12/01/2020 1145	% Solids: 27.7 12/15/2020 0100
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 1949	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	0.72	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-003
Description: SED-44P2-12-18	Matrix: Solid
Date Sampled: 12/01/2020 1145	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 27.7 12/15/2020 0100

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/12/2020 0032	STM		76349	4.05

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		6.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		6.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		6.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		6.2	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		6.2	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		6.2	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		6.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		93	47-138
1,2-Dichloroethane-d4		91	53-142
Toluene-d8		116	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-004
Description: SED-43P2-0-6	Matrix: Solid
Date Sampled: 12/01/2020 1500	% Solids: 14.3 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 1950	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	1.9	1.4	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-004
Description: SED-43P2-0-6	Matrix: Solid
Date Sampled: 12/01/2020 1500	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 14.3 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/12/2020 0055	STM		76349	4.31

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		41	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		41	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		41	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		41	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		41	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		41	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		41	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		93	47-138
1,2-Dichloroethane-d4		92	53-142
Toluene-d8		116	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-005
Description: SED-43P2-6-12	Matrix: Solid
Date Sampled: 12/01/2020 1530	% Solids: 11.0 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 1956	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		4.9	1.8	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-005
Description: SED-43P2-6-12	Matrix: Solid
Date Sampled: 12/01/2020 1530	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 11.0 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/12/2020 0117	STM		76349	4.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		56	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		56	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		56	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		56	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		56	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		56	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		56	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		92	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		119	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-006
Description: SED-46P2-0-6	Matrix: Solid
Date Sampled: 12/02/2020 1330	% Solids: 9.45 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 1957	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	5.0	2.1	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-006
Description: SED-46P2-0-6	Matrix: Solid
Date Sampled: 12/02/2020 1330	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 9.45 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/12/2020 0141	STM		76349	3.60

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		74	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		74	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		74	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		74	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		74	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		74	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		74	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		91	47-138
1,2-Dichloroethane-d4		85	53-142
Toluene-d8		119	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-007
Description: SED-46P2-6-12	Matrix: Solid
Date Sampled: 12/02/2020 1400	% Solids: 18.1 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 1958	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	1.8	1.1	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-007
Description: SED-46P2-6-12	Matrix: Solid
Date Sampled: 12/02/2020 1400	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 18.1 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/12/2020 0203	STM		76349	3.82

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		36	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		36	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		36	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		36	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		36	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		36	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		36	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		96	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		118	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-008
Description: SED-45P2-0-6	Matrix: Solid
Date Sampled: 12/02/2020 1415	% Solids: 12.9 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 2000	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	2.7	1.5	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-008
Description: SED-45P2-0-6	Matrix: Solid
Date Sampled: 12/02/2020 1415	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 12.9 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	12/15/2020 1219	JM1		76558	3.93

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		49	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		49	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		49	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		49	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		49	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		49	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		49	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		81	47-138
1,2-Dichloroethane-d4		89	53-142
Toluene-d8		93	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-009
Description: SED-45P2-6-12	Matrix: Solid
Date Sampled: 12/02/2020 1500	% Solids: 20.9 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 2001	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	1.4	0.96	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-009
Description: SED-45P2-6-12	Matrix: Solid
Date Sampled: 12/02/2020 1500	Project Name: CVOC
Date Received: 12/02/2020	Project Number:
	% Solids: 20.9 12/02/2020 2355

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/12/2020 0248	STM		76349	4.33

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		28	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		28	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		28	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		28	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		28	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		28	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		28	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		95	47-138
1,2-Dichloroethane-d4		83	53-142
Toluene-d8		114	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-010
Description: TB-01-120220	Matrix: Aqueous
Date Sampled: 12/02/2020	Project Name: CVOC
Date Received: 12/02/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	12/09/2020 1047	BWS		75977

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260D	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260D	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260D	ND		1.0	ug/L	1
Vinyl chloride	75-01-4	8260D	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		100	70-130
1,2-Dichloroethane-d4		90	70-130
Toluene-d8		93	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-011
Description: SED-19P2-0-6	Matrix: Solid
Date Sampled: 12/02/2020 1530	% Solids: 9.54 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 2002	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	4.2	2.1	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-011
Description: SED-19P2-0-6	Matrix: Solid
Date Sampled: 12/02/2020 1530	% Solids: 9.54 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/14/2020 1606	JM1		76437	3.52

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		74	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		74	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		74	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		74	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		74	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		74	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		74	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		108	47-138
1,2-Dichloroethane-d4		92	53-142
Toluene-d8		112	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-012
Description: SED-19P2-6-12	Matrix: Solid
Date Sampled: 12/02/2020 1550	% Solids: 11.3 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 2008	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		3.7	1.8	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-012
Description: SED-19P2-6-12	Matrix: Solid
Date Sampled: 12/02/2020 1550	% Solids: 11.3 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/14/2020 1629	JM1		76437	3.72

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		60	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		60	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		60	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		60	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		60	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		60	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		60	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		109	47-138
1,2-Dichloroethane-d4		94	53-142
Toluene-d8		108	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-013
Description: SED-19P2-12-18	Matrix: Solid
Date Sampled: 12/02/2020 1610	% Solids: 24.5 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 2009	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	2.1	0.82	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-013
Description: SED-19P2-12-18	Matrix: Solid
Date Sampled: 12/02/2020 1610	% Solids: 24.5 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/14/2020 1652	JM1		76437	3.96

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		26	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		26	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		26	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		26	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		26	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		26	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		26	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		112	47-138
1,2-Dichloroethane-d4		102	53-142
Toluene-d8		101	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL02096-014
Description: SED-19P2-12-18-DUP	Matrix: Solid
Date Sampled: 12/02/2020 1610	% Solids: 23.8 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	1	12/09/2020 2010	SRB		76083

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		1.8	0.84	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL02096-014
Description: SED-19P2-12-18-DUP	Matrix: Solid
Date Sampled: 12/02/2020 1610	% Solids: 23.8 12/02/2020 2355
Date Received: 12/02/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/14/2020 1715	JM1		76437	4.35

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		24	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		24	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		24	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		24	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		24	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		24	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		24	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		113	47-138
1,2-Dichloroethane-d4		91	53-142
Toluene-d8		99	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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Chain of Custody  
and  
Miscellaneous Documents



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**Number 114506**

Client: **AECOM**  
 Address: **101 Research Dr., Columbia, SC 29203**  
 Project Name: **Westinghouse**  
 Project No.: \_\_\_\_\_  
 Report to Contact: **Debra Grant**  
 Sampler's Signature: *[Signature]*  
 Project Name: **Mike de Kozlowski**  
 Project No.: \_\_\_\_\_

Telephone No. / Email: **Debra.Grant@aecom.com**  
 Analysis (Attach w/ if more space is needed): \_\_\_\_\_  
 Quote No.: \_\_\_\_\_  
 Page **1** of **2**  
 Barcode: **VL02096**  
 SWS: \_\_\_\_\_  
 Remarks / Cooler I.D.: \_\_\_\_\_

Sample ID / Description (Containers for each sample may be returned on one line)	Collection Date(s)	Collection Time (Military)	Matrix	No. of Containers by Preservative Type					GC Requirements (Specify)	
				None	Formaldehyde	Ascorbic Acid	None	None		
SED-44P2-0-6	12/1/20	1115	X	4					X	
SED-44P2-6-12	12/1/20	1130	X	4					X	
SED-44P2-12-18	12/1/20	1145	X	4					X	
SED-43P2-0-6	12/1/20	1500	X	4					X	
SED-43P2-6-12	12/1/20	1530	X	4					X	
SED-46P2-0-6	12/2/20	1330	X	4					X	
SED-46P2-6-12	12/2/20	1400	X	4					X	
SED-45P2-0-6	12/2/20	1415	X	4					X	
SED-45P2-6-12	12/2/20	1500	X	4					X	
TB-01-120220	12/2/20	-	X						X	

Sample's Disposal:  Return to Client  Disposed by Lab

Possible Hazards Identification:  
 Non-Hazard  Flammable  Skin Irritant  Poison  Inhalation

1. Relinquished by: *[Signature]* Date: 12/2/20 Time: 1743  
 2. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 3. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 4. Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

GC Requirements (Specify):  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Date: 12/1/20 Time: 1748  
 Temp Blank:  Y  N

LAB USE ONLY  
 Received on ice (Circled):  No  Yes  
 Ice Pack: \_\_\_\_\_  
 Recolor Temp: 3.5 °C

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-Final/Client Copy

Document Number: MED00192-01



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Number **L14507**

Client <b>AECOM</b> Address <b>101 Reservoir Dr.</b> City <b>Columbia</b> State <b>SC</b> Zip Code <b>29203</b>		Report to Contact Name <b>Jeremy Grant</b> Signature <i>[Signature]</i> Title <b>Project Manager</b>		Telephone No. / Email <b>jeremy.grant@aecom.com</b>		Quote No.
Project Name <b>West by the Lake</b>		Analyst (Attach ref if more space is needed) <b>Mike deKozlowski</b>		Page <b>2</b> of <b>2</b>		<p><b>VL02096</b> BMS Remarks / Cooler I.D.</p>
Sample ID / Description (Containers for each sample may be combined on one form.)		P.O. No.		Matrix		
Collection Date (M/D/Y)		Collection Time (M/D/Y)		No. of Containers by Preservative Type		
Sample ID / Description		Collection Date (M/D/Y)		Collection Time (M/D/Y)		
Sample ID / Description		Collection Date (M/D/Y)		Collection Time (M/D/Y)		

Sample ID / Description	Collection Date (M/D/Y)	Collection Time (M/D/Y)	Matrix	No. of Containers by Preservative Type	Analysis	Remarks
SEP-1992-0-6	12/2/20	1530	X	4	X	
SEP-1492-6-12	12/2/20	1550	X	4	X	
SEP-1992-12-18	12/2/20	1610	X	4	X	
SEP-1992-12-18-DUP	12/2/20	1610	X	4	X	

Turn Around Time Required (Prior lab approval required for expedited RTT.)  
 Standard  Rush (Specify)

1. Requisitioned by *[Signature]*  
 2. Requisitioned by  
 3. Requisitioned by  
 4. Requisitioned by

Sample Disposal  
 Return to Client  Disposed by (Date) **12/2/20** Time **1748**

Possible Hazard Identification:  
 Non-Hazard  Flammable  Skin Irritant  Poison  Unknown

QC Requirements (Specify)  
 Date Time  
 Date Time  
 Date Time  
 Date Time **1748**  
 Temp Blank **35**   N

Note: All samples are retained for four weeks from receipt unless other arrangements are made.

Document Number: MED2012-01

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s); PINK-Field/Client Copy

# PACE ANALYTICAL SERVICES, LLC



**Samples Receipt Checklist (SRC) (ME0018C-15)**  
Issuing Authority: Pace ENV - WCOL

Revised: 9/29/2020  
Page 1 of 1

## Sample Receipt Checklist (SRC)

Client: AECOM

Cooler Inspected by/date: KBS / 12/02/2020

Lot #: V1.02095

Means of receipt: <input type="checkbox"/> Pace <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA Chlorine Strip ID: NA Tested by: NA	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: 20-2056	
3.5 / 3.5 °C NA / NA °C NA / NA °C NA / NA °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: 0 IR Gun Correction Factor: 0 °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pca-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # NA
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L (If #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA	
SR barcode labels applied by: KBS Date: 12/02/2020	
Comments:	



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## Report of Analysis

**Westinghouse Electric Company**  
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: CVOC

Lot Number: **VL04007**

Date Completed: 01/04/2021

01/04/2021 11:20 AM  
Approved and released by:  
Project Manager I: **Blaire M. Gagne**



The electronic signature above is the equivalent of a handwritten signature.  
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# PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: VL04007

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 The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

### **Volatile Organic Analysis- Method**

The internal standard response for VL04007-001, VL04007-002, VL04007-005, VL04007-006, VL04007-009, and VL04007-010 and the MS/MSD pair was outside of the acceptance limits. All samples were re-analyzed yielding the same results. The associated sample results were reported and no corrective action was required.

Samples VL04007-001, VL04007-002, VL04007-005, VL04007-006, VL04007-009, and VL04007-010 had the surrogates recover outside of the acceptance limits for MS/MSD. No sample remained for re-extraction/re-analysis. The sample results are reported and no corrective action is required.

The continuing calibration verification (CCV) associated with batch 76513 had Vinyl chloride recover below acceptance limits. There were no detections for this compound in the associated samples. A LOQ standard was analyzed and the compound was detected, demonstrating there was adequate sensitivity to identify the analyte if it were present.

### **Nitrate Analysis - Method 353.3**

The sample was analyzed at a 5x dilution due to matrix interference. The reporting limits were raised accordingly.

# PACE ANALYTICAL SERVICES, LLC

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Sample Summary  
Westinghouse Electric Company  
Lot Number: VL04007  
Project Name: CVOC  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-50P2-0-6	Solid	12/03/2020 1130	12/03/2020
002	SED-50P2-6-12	Solid	12/03/2020 1145	12/03/2020
003	SED-50P2-12-24	Solid	12/03/2020 1200	12/03/2020
004	SED-49P2-0-6	Solid	12/03/2020 1245	12/03/2020
005	SED-49P2-6-12	Solid	12/03/2020 1300	12/03/2020
006	SED-48P2-0-6	Solid	12/03/2020 1315	12/03/2020
007	SED-48P2-6-12	Solid	12/03/2020 1325	12/03/2020
008	SED-48P2-12-18	Solid	12/03/2020 1335	12/03/2020
009	SED-47P2-0-6	Solid	12/03/2020 1415	12/03/2020
010	SED-47P2-6-12	Solid	12/03/2020 1400	12/03/2020
011	EB-01-120320	Aqueous	12/03/2020 1630	12/03/2020
012	TB-01-120320	Aqueous	12/03/2020	12/03/2020

(12 samples)

# PACE ANALYTICAL SERVICES, LLC

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Detection Summary  
Westinghouse Electric Company  
Lot Number: VL04007  
Project Name: CVOC  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
002	SED-50P2-6-12	Solid	Nitrate - N (soluble)	353.2	6.1		mg/kg	8

(1 detection)



# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-001
Description: SED-50P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1130	% Solids: 15.0 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2316	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	6.7	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-001
Description: SED-50P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1130	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 15.0 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	12/15/2020 0057	STM		76513	3.64

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		46	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		46	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		46	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		46	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		46	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		46	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		46	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		108	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		106	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-002
Description: SED-50P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1145	% Solids: 27.2 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2317	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	6.1	3.7	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-002
Description: SED-50P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1145	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 27.2 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	12/15/2020 0120	STM		76513	4.43

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		21	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		21	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		21	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		21	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		21	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		21	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		21	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		109	47-138
1,2-Dichloroethane-d4		90	53-142
Toluene-d8		109	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-003
Description: SED-50P2-12-24	Matrix: Solid
Date Sampled: 12/03/2020 1200	% Solids: 26.2 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2319	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	3.8	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-003
Description: SED-50P2-12-24	Matrix: Solid
Date Sampled: 12/03/2020 1200	% Solids: 26.2 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/11/2020 1541	JM1		76279	3.81

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		25	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		25	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		25	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		25	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		25	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		25	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		25	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		93	47-138
1,2-Dichloroethane-d4		93	53-142
Toluene-d8		118	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-004
Description: SED-49P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1245	% Solids: 17.9 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2323	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	5.6	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-004
Description: SED-49P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1245	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 17.9 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/11/2020 1604	JM1		76279	3.52

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		40	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		40	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		40	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		40	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		40	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		40	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		40	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		97	47-138
1,2-Dichloroethane-d4		90	53-142
Toluene-d8		113	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-005
Description: SED-49P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1300	% Solids: 35.3 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2324	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	2.8	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-005
Description: SED-49P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1300	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 35.3 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	12/15/2020 0143	STM		76513	4.46

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		16	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		16	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		16	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		16	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		16	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		16	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		16	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		104	47-138
1,2-Dichloroethane-d4		88	53-142
Toluene-d8		105	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-006
Description: SED-48P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1315	% Solids: 15.6 12/05/2020 1622
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2325	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		353.2	ND		6.4	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-006
Description: SED-48P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1315	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 15.6 12/05/2020 1622

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	12/15/2020 0227	STM		76513	4.59

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		35	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		35	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		35	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		35	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		35	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		35	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		35	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		111	47-138
1,2-Dichloroethane-d4		93	53-142
Toluene-d8		101	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-007
Description: SED-48P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1325	% Solids: 59.0 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2331	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	1.7	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-007
Description: SED-48P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1325	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 59.0 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/11/2020 1713	JM1		76279	5.49

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		7.7	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		7.7	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.7	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.7	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		7.7	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		7.7	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		7.7	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		99	47-138
1,2-Dichloroethane-d4		99	53-142
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-008
Description: SED-48P2-12-18	Matrix: Solid
Date Sampled: 12/03/2020 1335	% Solids: 66.8 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2332	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		ND	1.5	mg/kg 1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-008
Description: SED-48P2-12-18	Matrix: Solid
Date Sampled: 12/03/2020 1335	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 66.8 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/11/2020 1736	JM1		76279	5.28

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		7.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		7.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.1	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		7.1	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		7.1	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		7.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		106	47-138
1,2-Dichloroethane-d4		86	53-142
Toluene-d8		100	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-009
Description: SED-47P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1415	% Solids: 21.1 12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2333	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2	ND	4.7	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-009
Description: SED-47P2-0-6	Matrix: Solid
Date Sampled: 12/03/2020 1415	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 21.1 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	12/15/2020 0335	STM		76513	3.61

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		33	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		33	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		33	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		33	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		33	ug/kg	2
Trichloroethene	79-01-6	8260D	ND		33	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		33	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		102	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-010
Description: SED-47P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1400	% Solids: 12.1    12/04/2020 2315
Date Received: 12/03/2020	Project Name: CVOC
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 353.2	5	12/30/2020 2335	SRB		78206

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)			353.2		8.2	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-010
Description: SED-47P2-6-12	Matrix: Solid
Date Sampled: 12/03/2020 1400	Project Name: CVOC
Date Received: 12/03/2020	Project Number:
	% Solids: 12.1 12/04/2020 2315

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	12/11/2020 1821	JM1		76279	3.81

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		54	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		54	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		54	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		54	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		54	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		54	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		54	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		90	47-138
1,2-Dichloroethane-d4		86	53-142
Toluene-d8		123	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: VL04007-011
Description: EB-01-120320	Matrix: Aqueous
Date Sampled: 12/03/2020 1630	Project Name: CVOC
Date Received: 12/03/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N) 353.2	1	12/04/2020 2220	SRB		75607

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N			353.2	ND	0.020	mg/L	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-011
Description: EB-01-120320	Matrix: Aqueous
Date Sampled: 12/03/2020 1630	Project Name: CVOC
Date Received: 12/03/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	12/10/2020 1129	TML		76124

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260D	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260D	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260D	ND		1.0	ug/L	1
Vinyl chloride	75-01-4	8260D	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		105	70-130
1,2-Dichloroethane-d4		109	70-130
Toluene-d8		96	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: VL04007-012
Description: TB-01-120320	Matrix: Aqueous
Date Sampled: 12/03/2020	Project Name: CVOC
Date Received: 12/03/2020	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	5030B	8260D	1	12/10/2020 1152	TML		76124

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,2-Dichloroethane	107-06-2	8260D	ND		1.0	ug/L	1
1,1-Dichloroethene	75-35-4	8260D	ND		1.0	ug/L	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		1.0	ug/L	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		1.0	ug/L	1
Tetrachloroethene	127-18-4	8260D	ND		1.0	ug/L	1
Trichloroethene	79-01-6	8260D	ND		1.0	ug/L	1
Vinyl chloride	75-01-4	8260D	ND		1.0	ug/L	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		105	70-130
1,2-Dichloroethane-d4		109	70-130
Toluene-d8		97	70-130

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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Chain of Custody  
and  
Miscellaneous Documents





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**Number 114508**

<b>Client</b> AFCON Address 101 Research Dr. Columbia SC 29203 Project Name Westinghouse Project No.		<b>Report to Contact</b> Jeremy Grant Sampler's Signature M. de Kozlowski Printed Name M. de Kozlowski		<b>Telephone No. / Email</b> Jeremy Grant @ pacelabs.com (Add Analysis Attach list if more space is needed)		<b>Quote No.</b> VL04007 BME Remains / Quoter I.D.	
<b>Sample ID / Description</b> (Containers for each sample may be contained on one form.)		<b>P.O. No.</b> Collection Date (Mandatory)		<b>Matrix</b> Sediment		<b>No. of Containers by Preservative Type</b> None, HCl, HNO3, H2O2, Other	
SED-50P2-0-6	12/31/20	1130	G	X	4	1	X
SED-50P2-6-12	12/31/20	1145	G	X	4	1	X
SED-50P2-12-24	12/31/20	1200	G	X	12	3	X
SED-44P2-0-6	12/31/20	1245	G	X	4	1	X
SED-44P2-6-12	12/31/20	1300	G	X	4	1	X
SED-44P2-0-6	12/31/20	1315	G	X	4	1	X
SED-48P2-6-12	12/31/20	1325	G	X	4	1	X
SED-48P2-12-18	12/31/20	1335	G	X	4	1	X
SED-47P2-0-6	12/31/20	1415	G	X	4	1	X
SED-47P2-6-12	12/31/20	1400	G	X	4	1	X

**Turn Around Time Required (Prior lab approval required for expedited TAT):** Sample Disposal  
 Return to Client  Recyclable  Non-Hazard  Poison  Unknown

**1. Requisitioned by:** M. de Kozlowski  
**2. Requisitioned by:** M. de Kozlowski  
**3. Requisitioned by:**  
**4. Requisitioned by:**

**OC Requirements (Specify):**  
 Date: 12/31/20 Time: 1400  
 Date: Time  
 Date: Time  
 Date: Time  
 Date: 12/31/20 Time: 1900  
 Receipt Temp: 2.1 °C  
 LAB USE ONLY  
 Requisitioned on (City) (State) (Zip) (Y/N) No Ice Pack Receipt Temp: 2.1 °C

**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: ME-003M2-01



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**Number** 114509

<b>Client</b> AFCom Address 101 Reservoir Dr Columbia Project Name Westinghouse Project No. State SC Zip Code 29203		<b>Report to Contact</b> Jensen Grant Sampler's Signature [Signature] Packed Name Mike de Kozlowski		Telephone No. / E-mail Jensen Grant @ pacelabs.com Analysis (Attach list if more space is needed)		Quote No. Page 2 of 2	
Sample ID / Description (Containers for each sample may be purchased in one lot.) EB-01-120320 TB-01-120320		F.O. No. Collection Date(s) 12/31/20 12/31/20	Collection Time (Military) 1630 --	Matrix Air Soil Sediment Sludge Other	No. of Containers by Preservative Type None HCl HNO <sub>3</sub> H <sub>2</sub> O <sub>2</sub> Other	Remarks / Container I.D. NO <sub>3</sub> NO <sub>3</sub> CVOCs 8260	BING VL04007
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"/> 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		GC Requirements (Specify)	
1. Retinquished by [Signature]		Date 12/31/20 Time 1900		1. Received by		Date Time	
2. Retinquished by		Date Time		2. Received by		Date Time	
3. Retinquished by		Date Time		3. Received by		Date Time	
4. Retinquished by		Date Time		4. Laboratory received by [Signature]		Date Time 12/31/20 1800	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		LAB USE ONLY Received on Job (Circle) Yes No Use Pack		Receipt Temp. 2.1 °C		Temp Blank Y = N	

Document Number: ME03MS2-01

DISTRIBUTION: WHITE & YELLOW-Neium to laboratory with Sample(s); PINK-Field/Client Copy

# PACE ANALYTICAL SERVICES, LLC



**Samples Receipt Checklist (SRC) (ME0018C-15)**  
Issuing Authority: Pace ENV - WCOL

Revised: 9/29/2020  
Page 1 of 1

## Sample Receipt Checklist (SRC)

Client: Aecom Cooler Inspected by/date: JSH / 12/04/2020 Lot #: VL04007

Means of receipt: <input type="checkbox"/> Pace <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other: _____	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: <u>NA</u> Chlorine Strip ID: <u>NA</u> Tested by: <u>NA</u>	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt %Solid Snap-Cup ID: <u>20-2036</u>	
2.1 / 2.1 °C <u>NA</u> / <u>NA</u> °C <u>NA</u> / <u>NA</u> °C <u>NA</u> / <u>NA</u> °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles IR Gun ID: <u>6</u> IR Gun Correction Factor: <u>0</u> °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>3</sub> /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # _____
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) <u>NA</u> were received incorrectly preserved and were adjusted accordingly in sample receiving with <u>NA</u> mL of circle one: H <sub>2</sub> SO <sub>4</sub> , HNO <sub>3</sub> , HCl, NaOH using SR # <u>NA</u> .	
Time of preservation <u>NA</u> . If more than one preservative is needed, please note in the comments below.	
Sample(s) <u>NA</u> were received with bubbles >6 mm in diameter.	
Samples(s) <u>NA</u> were received with TRC > 0.5 mg/L (If #19 is <i>no</i> ) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: <u>NA</u> .	
SR barcode labels applied by: <u>JSH</u> Date: <u>12/04/2020</u>	

Comments:

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## Report of Analysis

**Westinghouse Electric Company**  
5801 Bluff Rd.  
Hopkins, SC 29061  
Attention: Diana Joyner

Project Name: Westinghouse RI Q2

Lot Number: **WC09074**

Date Completed: 03/17/2021

03/19/2021 2:35 PM

Approved and released by:  
Project Manager I: **Blaire M. Gagne**



The electronic signature above is the equivalent of a handwritten signature.  
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106 Vantage Point Drive West Columbia, SC 29172  
Tel: 803-791-9700 Fax: 803-791-9111 www.pacelabs.com

# PACE ANALYTICAL SERVICES, LLC

SC DHEC No: 32010001

NELAC No: E87653

NC DENR No: 329

NC Field Parameters No: 5639

## Case Narrative Westinghouse Electric Company Lot Number: WC09074

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 The NELAC Institute (TNI) standards, the Pace Analytical Services, LLC ("Pace") Laboratory Quality Manual, standard operating procedures (SOPs), and Pace policies. Any exceptions to the TNI standards, the Laboratory Quality Manual, SOPs or policies are qualified on the results page or discussed below.

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W" qualifier

If you have any questions regarding this report please contact the Pace Project Manager listed on the cover page.

### **Nitrate Analysis- Method 9056A**

The sample WC09074-008, -009 was analyzed at a 5x dilution due to matrix interference. The reporting limits were raised accordingly

### **Volatiles Analysis- Method 8260D**

The matrix spike/matrix spike duplicate was not performed due to insufficient sample volume for batch 85546. An LCS/LCSD was run instead. An LCS/LCSD was also run instead for batch 85816.

The internal standard for WC09074-005 was outside of the acceptance limits. All samples were re-analyzed yielding the same results in the MSD. The sample results may be biased high. The original set of data has been reported

The internal standard for WC09074-007 was outside of the acceptance limits. The sample was re-analyzed with concurring internal standard results, however, run 2 has been reported since surrogate standard passed within criteria.

The internal standard for WC09074-010 was outside of the acceptance limits. All samples were re-analyzed yielding the same results. The sample results may be biased high. The sample results may be biased high. The associated sample results were reported and no corrective action was required.

# PACE ANALYTICAL SERVICES, LLC

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Sample Summary  
Westinghouse Electric Company  
Lot Number: WC09074  
Project Name: Westinghouse RI Q2  
Project Number:

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	SED-68-0-6	Solid	03/08/2021 1345	03/09/2021
002	SED-68-6-12	Solid	03/08/2021 1430	03/09/2021
003	SED-68-12-24	Solid	03/08/2021 1445	03/09/2021
004	SED-68-12-24-DUP	Solid	03/08/2021 1445	03/09/2021
005	SED-67-0-6	Solid	03/08/2021 1620	03/09/2021
006	SED-67-6-12	Solid	03/08/2021 1630	03/09/2021
007	SED-67-12-14	Solid	03/08/2021 1645	03/09/2021
008	SED-66-0-6	Solid	03/09/2021 1145	03/09/2021
009	SED-66-6-12	Solid	03/09/2021 1200	03/09/2021
010	SED-66-12-24	Solid	03/09/2021 1215	03/09/2021

(10 samples)

# PACE ANALYTICAL SERVICES, LLC

Detection Summary  
Westinghouse Electric Company  
Lot Number: WC09074  
Project Name: Westinghouse RI Q2  
Project Number:

Sample	Sample ID	Matrix	Parameter	Method	Result	Q	Units	Page
001	SED-68-0-6	Solid	Acetone	8260D	87		ug/kg	7
002	SED-68-6-12	Solid	Acetone	8260D	58		ug/kg	10
003	SED-68-12-24	Solid	Acetone	8260D	82		ug/kg	13
004	SED-68-12-24-DUP	Solid	Acetone	8260D	57		ug/kg	16
005	SED-67-0-6	Solid	Acetone	8260D	72		ug/kg	19
006	SED-67-6-12	Solid	Acetone	8260D	48		ug/kg	22
007	SED-67-12-14	Solid	Acetone	8260D	66		ug/kg	25
008	SED-66-0-6	Solid	Acetone	8260D	220		ug/kg	28
008	SED-66-0-6	Solid	2-Butanone (MEK)	8260D	73		ug/kg	28
009	SED-66-6-12	Solid	Acetone	8260D	120		ug/kg	31
009	SED-66-6-12	Solid	2-Butanone (MEK)	8260D	26		ug/kg	31
010	SED-66-12-24	Solid	Acetone	8260D	160		ug/kg	34
010	SED-66-12-24	Solid	2-Butanone (MEK)	8260D	46		ug/kg	34

(13 detections)

# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-001
Description: SED-68-0-6	Matrix: Solid
Date Sampled: 03/08/2021 1345	% Solids: 70.6 03/11/2021 0002
Date Received: 03/09/2021	Project Name: Westinghouse RI Q2
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1410	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-001
Description: SED-68-0-6	Matrix: Solid
Date Sampled: 03/08/2021 1345	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 70.6 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1549	JM1		85405	5.49

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	87		18	ug/kg	1
Benzene	71-43-2	8260D	ND		4.6	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		4.6	ug/kg	1
Bromoform	75-25-2	8260D	ND		4.6	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		4.6	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	ND		18	ug/kg	1
Carbon disulfide	75-15-0	8260D	ND		4.6	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		4.6	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		4.6	ug/kg	1
Chloroethane	75-00-3	8260D	ND		4.6	ug/kg	1
Chloroform	67-66-3	8260D	ND		4.6	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		4.6	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		4.6	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		4.6	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		4.6	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		4.6	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		4.6	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		4.6	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		4.6	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		4.6	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		4.6	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		4.6	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.6	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.6	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.6	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		4.6	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		4.6	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		4.6	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		4.6	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		9.1	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		4.6	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		4.6	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		4.6	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		9.1	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		4.6	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		4.6	ug/kg	1
Styrene	100-42-5	8260D	ND		4.6	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		4.6	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.6	ug/kg	1
Toluene	108-88-3	8260D	ND		4.6	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		4.6	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		4.6	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		4.6	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260D	ND		4.6	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-001
Description: SED-68-0-6	Matrix: Solid
Date Sampled: 03/08/2021 1345	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 70.6 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1549	JM1		85405	5.49

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		4.6	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		4.6	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.6	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		9.1	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		104	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		103	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-002
Description: SED-68-6-12	Matrix: Solid
Date Sampled: 03/08/2021 1430	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 75.9 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1429	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-002
Description: SED-68-6-12	Matrix: Solid
Date Sampled: 03/08/2021 1430	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 75.9 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1612	JM1		85405	5.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	58		17	ug/kg	1
Benzene	71-43-2	8260D	ND		4.2	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		4.2	ug/kg	1
Bromoform	75-25-2	8260D	ND		4.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		4.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	ND		17	ug/kg	1
Carbon disulfide	75-15-0	8260D	ND		4.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		4.2	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		4.2	ug/kg	1
Chloroethane	75-00-3	8260D	ND		4.2	ug/kg	1
Chloroform	67-66-3	8260D	ND		4.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		4.2	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		4.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		4.2	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		4.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		4.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		4.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		4.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		4.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		4.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		4.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		4.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		4.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		4.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		4.2	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		4.2	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		8.5	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		4.2	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		4.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		4.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		8.5	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		4.2	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		4.2	ug/kg	1
Styrene	100-42-5	8260D	ND		4.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		4.2	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.2	ug/kg	1
Toluene	108-88-3	8260D	ND		4.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		4.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		4.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		4.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260D	ND		4.2	ug/kg	1

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-002
Description: SED-68-6-12	Matrix: Solid
Date Sampled: 03/08/2021 1430	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 75.9 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1612	JM1		85405	5.91

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		4.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		4.2	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.2	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		8.5	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		105	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-003
Description: SED-68-12-24	Matrix: Solid
Date Sampled: 03/08/2021 1445	% Solids: 74.8 03/11/2021 0002
Date Received: 03/09/2021	Project Name: Westinghouse RI Q2
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1448	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-003
Description: SED-68-12-24	Matrix: Solid
Date Sampled: 03/08/2021 1445	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 74.8 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1634	JM1		85405	6.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	82		16	ug/kg	1
Benzene	71-43-2	8260D	ND		4.1	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		4.1	ug/kg	1
Bromoform	75-25-2	8260D	ND		4.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		4.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	ND		16	ug/kg	1
Carbon disulfide	75-15-0	8260D	ND		4.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		4.1	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		4.1	ug/kg	1
Chloroethane	75-00-3	8260D	ND		4.1	ug/kg	1
Chloroform	67-66-3	8260D	ND		4.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		4.1	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		4.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		4.1	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		4.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		4.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		4.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		4.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		4.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		4.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		4.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		4.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		4.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		4.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		4.1	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		4.1	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		8.2	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		4.1	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		4.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		4.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		8.2	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		4.1	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		4.1	ug/kg	1
Styrene	100-42-5	8260D	ND		4.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		4.1	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.1	ug/kg	1
Toluene	108-88-3	8260D	ND		4.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		4.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		4.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		4.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260D	ND		4.1	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-003
Description: SED-68-12-24	Matrix: Solid
Date Sampled: 03/08/2021 1445	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 74.8 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1634	JM1		85405	6.08

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		4.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		4.1	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.1	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		8.2	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		105	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		105	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-004
Description: SED-68-12-24-DUP	Matrix: Solid
Date Sampled: 03/08/2021 1445	% Solids: 73.4 03/11/2021 0002
Date Received: 03/09/2021	Project Name: Westinghouse RI Q2
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1445	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-004
Description: SED-68-12-24-DUP	Matrix: Solid
Date Sampled: 03/08/2021 1445	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 73.4 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1657	JM1		85405	5.98

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	57		17	ug/kg	1
Benzene	71-43-2	8260D	ND		4.2	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		4.2	ug/kg	1
Bromoform	75-25-2	8260D	ND		4.2	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		4.2	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	ND		17	ug/kg	1
Carbon disulfide	75-15-0	8260D	ND		4.2	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		4.2	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		4.2	ug/kg	1
Chloroethane	75-00-3	8260D	ND		4.2	ug/kg	1
Chloroform	67-66-3	8260D	ND		4.2	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		4.2	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		4.2	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		4.2	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		4.2	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		4.2	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		4.2	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		4.2	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		4.2	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		4.2	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		4.2	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		4.2	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		4.2	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		4.2	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		4.2	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		4.2	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		4.2	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		4.2	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		4.2	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		8.4	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		4.2	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		4.2	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		4.2	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		8.4	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		4.2	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		4.2	ug/kg	1
Styrene	100-42-5	8260D	ND		4.2	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		4.2	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		4.2	ug/kg	1
Toluene	108-88-3	8260D	ND		4.2	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		4.2	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		4.2	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		4.2	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260D	ND		4.2	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-004
Description: SED-68-12-24-DUP	Matrix: Solid
Date Sampled: 03/08/2021 1445	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 73.4 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1657	JM1		85405	5.98

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		4.2	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		4.2	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		4.2	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		8.4	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		103	47-138
1,2-Dichloroethane-d4		96	53-142
Toluene-d8		105	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-005
Description: SED-67-0-6	Matrix: Solid
Date Sampled: 03/08/2021 1620	% Solids: 14.5 03/11/2021 0002
Date Received: 03/09/2021	Project Name: Westinghouse RI Q2
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1504	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

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LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-005
Description: SED-67-0-6	Matrix: Solid
Date Sampled: 03/08/2021 1620	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 14.5 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1720	JM1		85405	3.52

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	72		28	ug/kg	1
Benzene	71-43-2	8260D	ND		7.1	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		7.1	ug/kg	1
Bromoform	75-25-2	8260D	ND		7.1	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		7.1	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	ND		28	ug/kg	1
Carbon disulfide	75-15-0	8260D	ND		7.1	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		7.1	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		7.1	ug/kg	1
Chloroethane	75-00-3	8260D	ND		7.1	ug/kg	1
Chloroform	67-66-3	8260D	ND		7.1	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		7.1	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		7.1	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		7.1	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		7.1	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		7.1	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		7.1	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		7.1	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		7.1	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		7.1	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		7.1	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		7.1	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		7.1	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		7.1	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		7.1	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		7.1	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		7.1	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		7.1	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		7.1	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		14	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		7.1	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		7.1	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		7.1	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		14	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		7.1	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		7.1	ug/kg	1
Styrene	100-42-5	8260D	ND		7.1	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		7.1	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		7.1	ug/kg	1
Toluene	108-88-3	8260D	ND		7.1	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		7.1	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		7.1	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		7.1	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260D	ND		7.1	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
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 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-005
Description: SED-67-0-6	Matrix: Solid
Date Sampled: 03/08/2021 1620	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 14.5 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1720	JM1		85405	3.52

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		7.1	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		7.1	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		7.1	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		14	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		84	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		123	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-006
Description: SED-67-6-12	Matrix: Solid
Date Sampled: 03/08/2021 1630	% Solids: 30.3 03/11/2021 0002
Date Received: 03/09/2021	Project Name: Westinghouse RI Q2
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1523	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-006
Description: SED-67-6-12	Matrix: Solid
Date Sampled: 03/08/2021 1630	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 30.3 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	03/16/2021 1211	TML		85816	4.35

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	48		23	ug/kg	2
Benzene	71-43-2	8260D	ND		5.7	ug/kg	2
Bromodichloromethane	75-27-4	8260D	ND		5.7	ug/kg	2
Bromoform	75-25-2	8260D	ND		5.7	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		5.7	ug/kg	2
2-Butanone (MEK)	78-93-3	8260D	ND		23	ug/kg	2
Carbon disulfide	75-15-0	8260D	ND		5.7	ug/kg	2
Carbon tetrachloride	56-23-5	8260D	ND		5.7	ug/kg	2
Chlorobenzene	108-90-7	8260D	ND		5.7	ug/kg	2
Chloroethane	75-00-3	8260D	ND		5.7	ug/kg	2
Chloroform	67-66-3	8260D	ND		5.7	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		5.7	ug/kg	2
Cyclohexane	110-82-7	8260D	ND		5.7	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		5.7	ug/kg	2
Dibromochloromethane	124-48-1	8260D	ND		5.7	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		5.7	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260D	ND		5.7	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260D	ND		5.7	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260D	ND		5.7	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260D	ND		5.7	ug/kg	2
1,1-Dichloroethane	75-34-3	8260D	ND		5.7	ug/kg	2
1,2-Dichloroethane	107-06-2	8260D	ND		5.7	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		5.7	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.7	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.7	ug/kg	2
1,2-Dichloropropane	78-87-5	8260D	ND		5.7	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		5.7	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		5.7	ug/kg	2
Ethylbenzene	100-41-4	8260D	ND		5.7	ug/kg	2
2-Hexanone	591-78-6	8260D	ND		11	ug/kg	2
Isopropylbenzene	98-82-8	8260D	ND		5.7	ug/kg	2
Methyl acetate	79-20-9	8260D	ND		5.7	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		5.7	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260D	ND		11	ug/kg	2
Methylcyclohexane	108-87-2	8260D	ND		5.7	ug/kg	2
Methylene chloride	75-09-2	8260D	ND		5.7	ug/kg	2
Styrene	100-42-5	8260D	ND		5.7	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		5.7	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		5.7	ug/kg	2
Toluene	108-88-3	8260D	ND		5.7	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		5.7	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		5.7	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260D	ND		5.7	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260D	ND		5.7	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-006
Description: SED-67-6-12	Matrix: Solid
Date Sampled: 03/08/2021 1630	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 30.3 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	03/16/2021 1211	TML		85816	4.35

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		5.7	ug/kg	2
Trichlorofluoromethane	75-69-4	8260D	ND		5.7	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		5.7	ug/kg	2
Xylenes (total)	1330-20-7	8260D	ND		11	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		99	47-138
1,2-Dichloroethane-d4		109	53-142
Toluene-d8		116	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-007
Description: SED-67-12-14	Matrix: Solid
Date Sampled: 03/08/2021 1645	% Solids: 30.2 03/11/2021 0002
Date Received: 03/09/2021	Project Name: Westinghouse RI Q2
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1542	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-007
Description: SED-67-12-14	Matrix: Solid
Date Sampled: 03/08/2021 1645	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 30.2 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	03/16/2021 1235	TML		85816	4.01

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	66		25	ug/kg	2
Benzene	71-43-2	8260D	ND		6.2	ug/kg	2
Bromodichloromethane	75-27-4	8260D	ND		6.2	ug/kg	2
Bromoform	75-25-2	8260D	ND		6.2	ug/kg	2
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		6.2	ug/kg	2
2-Butanone (MEK)	78-93-3	8260D	ND		25	ug/kg	2
Carbon disulfide	75-15-0	8260D	ND		6.2	ug/kg	2
Carbon tetrachloride	56-23-5	8260D	ND		6.2	ug/kg	2
Chlorobenzene	108-90-7	8260D	ND		6.2	ug/kg	2
Chloroethane	75-00-3	8260D	ND		6.2	ug/kg	2
Chloroform	67-66-3	8260D	ND		6.2	ug/kg	2
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		6.2	ug/kg	2
Cyclohexane	110-82-7	8260D	ND		6.2	ug/kg	2
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		6.2	ug/kg	2
Dibromochloromethane	124-48-1	8260D	ND		6.2	ug/kg	2
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		6.2	ug/kg	2
1,2-Dichlorobenzene	95-50-1	8260D	ND		6.2	ug/kg	2
1,3-Dichlorobenzene	541-73-1	8260D	ND		6.2	ug/kg	2
1,4-Dichlorobenzene	106-46-7	8260D	ND		6.2	ug/kg	2
Dichlorodifluoromethane	75-71-8	8260D	ND		6.2	ug/kg	2
1,1-Dichloroethane	75-34-3	8260D	ND		6.2	ug/kg	2
1,2-Dichloroethane	107-06-2	8260D	ND		6.2	ug/kg	2
1,1-Dichloroethene	75-35-4	8260D	ND		6.2	ug/kg	2
cis-1,2-Dichloroethene	156-59-2	8260D	ND		6.2	ug/kg	2
trans-1,2-Dichloroethene	156-60-5	8260D	ND		6.2	ug/kg	2
1,2-Dichloropropane	78-87-5	8260D	ND		6.2	ug/kg	2
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		6.2	ug/kg	2
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		6.2	ug/kg	2
Ethylbenzene	100-41-4	8260D	ND		6.2	ug/kg	2
2-Hexanone	591-78-6	8260D	ND		12	ug/kg	2
Isopropylbenzene	98-82-8	8260D	ND		6.2	ug/kg	2
Methyl acetate	79-20-9	8260D	ND		6.2	ug/kg	2
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		6.2	ug/kg	2
4-Methyl-2-pentanone	108-10-1	8260D	ND		12	ug/kg	2
Methylcyclohexane	108-87-2	8260D	ND		6.2	ug/kg	2
Methylene chloride	75-09-2	8260D	ND		6.2	ug/kg	2
Styrene	100-42-5	8260D	ND		6.2	ug/kg	2
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		6.2	ug/kg	2
Tetrachloroethene	127-18-4	8260D	ND		6.2	ug/kg	2
Toluene	108-88-3	8260D	ND		6.2	ug/kg	2
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		6.2	ug/kg	2
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		6.2	ug/kg	2
1,1,1-Trichloroethane	71-55-6	8260D	ND		6.2	ug/kg	2
1,1,2-Trichloroethane	79-00-5	8260D	ND		6.2	ug/kg	2

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-007
Description: SED-67-12-14	Matrix: Solid
Date Sampled: 03/08/2021 1645	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 30.2 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
2	5035	8260D	1	03/16/2021 1235	TML		85816	4.01

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		6.2	ug/kg	2
Trichlorofluoromethane	75-69-4	8260D	ND		6.2	ug/kg	2
Vinyl chloride	75-01-4	8260D	ND		6.2	ug/kg	2
Xylenes (total)	1330-20-7	8260D	ND		12	ug/kg	2

Surrogate	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		97	47-138
1,2-Dichloroethane-d4		107	53-142
Toluene-d8		111	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-008
Description: SED-66-0-6	Matrix: Solid
Date Sampled: 03/09/2021 1145	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 36.2 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	5	03/12/2021 1600	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		2.5	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-008
Description: SED-66-0-6	Matrix: Solid
Date Sampled: 03/09/2021 1145	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 36.2 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/12/2021 1351	JM1		85546	4.22
2	5035	8260D	1	03/16/2021 1258	TML		85816	2.81

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	220		36	ug/kg	2
Benzene	71-43-2	8260D	ND		5.9	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		5.9	ug/kg	1
Bromoform	75-25-2	8260D	ND		5.9	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		5.9	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	73		36	ug/kg	2
Carbon disulfide	75-15-0	8260D	ND		5.9	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		5.9	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		5.9	ug/kg	1
Chloroethane	75-00-3	8260D	ND		5.9	ug/kg	1
Chloroform	67-66-3	8260D	ND		5.9	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		5.9	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		5.9	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		5.9	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		5.9	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		5.9	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		5.9	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		5.9	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		5.9	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		5.9	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		5.9	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		5.9	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.9	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.9	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.9	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		5.9	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		5.9	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		5.9	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		5.9	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		12	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		5.9	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		5.9	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		5.9	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		12	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		5.9	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		5.9	ug/kg	1
Styrene	100-42-5	8260D	ND		5.9	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		5.9	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.9	ug/kg	1
Toluene	108-88-3	8260D	ND		5.9	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		5.9	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		5.9	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		5.9	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-008
Description: SED-66-0-6	Matrix: Solid
Date Sampled: 03/09/2021 1145	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 36.2 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/12/2021 1351	JM1		85546	4.22
2	5035	8260D	1	03/16/2021 1258	TML		85816	2.81

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1,2-Trichloroethane	79-00-5	8260D	ND		5.9	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.9	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		5.9	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.9	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		12	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		94	47-138		102	47-138
1,2-Dichloroethane-d4		97	53-142		102	53-142
Toluene-d8		109	68-124		116	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-009
Description: SED-66-6-12	Matrix: Solid
Date Sampled: 03/09/2021 1200	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 54.3 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	5	03/12/2021 1619	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		2.5	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-009
Description: SED-66-6-12	Matrix: Solid
Date Sampled: 03/09/2021 1200	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 54.3 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/12/2021 1414	JM1		85546	4.76
2	5035	8260D	1	03/16/2021 1322	TML		85816	4.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	120		21	ug/kg	2
Benzene	71-43-2	8260D	ND		5.3	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		5.3	ug/kg	1
Bromoform	75-25-2	8260D	ND		5.3	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		5.3	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	26		21	ug/kg	2
Carbon disulfide	75-15-0	8260D	ND		5.3	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		5.3	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		5.3	ug/kg	1
Chloroethane	75-00-3	8260D	ND		5.3	ug/kg	1
Chloroform	67-66-3	8260D	ND		5.3	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		5.3	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		5.3	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		5.3	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		5.3	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		5.3	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		5.3	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		5.3	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		5.3	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		5.3	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		5.3	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		5.3	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.3	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.3	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.3	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		5.3	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		5.3	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		5.3	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		5.3	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		11	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		5.3	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		5.3	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		5.3	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		11	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		5.3	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		5.3	ug/kg	1
Styrene	100-42-5	8260D	ND		5.3	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		5.3	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.3	ug/kg	1
Toluene	108-88-3	8260D	ND		5.3	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		5.3	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		5.3	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		5.3	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-009
Description: SED-66-6-12	Matrix: Solid
Date Sampled: 03/09/2021 1200	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 54.3 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/12/2021 1414	JM1		85546	4.76
2	5035	8260D	1	03/16/2021 1322	TML		85816	4.87

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
1,1,2-Trichloroethane	79-00-5	8260D	ND		5.3	ug/kg	1
Trichloroethene	79-01-6	8260D	ND		5.3	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		5.3	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.3	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits	Q	Run 2 % Recovery	Acceptance Limits
Bromofluorobenzene		104	47-138		100	47-138
1,2-Dichloroethane-d4		98	53-142		104	53-142
Toluene-d8		111	68-124		113	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Inorganic non-metals

Client: Westinghouse Electric Company	Laboratory ID: WC09074-010
Description: SED-66-12-24	Matrix: Solid
Date Sampled: 03/09/2021 1215	% Solids: 47.2 03/11/2021 0002
Date Received: 03/09/2021	Project Name: Westinghouse RI Q2
	Project Number:

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1		(Nitrate - N ) 9056A	1	03/12/2021 1638	AMR		85610

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Nitrate - N (soluble)		9056A	ND		0.50	mg/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-010
Description: SED-66-12-24	Matrix: Solid
Date Sampled: 03/09/2021 1215	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	% Solids: 47.2 03/11/2021 0002
Project Number:	

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1829	JM1		85405	4.56

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Acetone	67-64-1	8260D	160		22	ug/kg	1
Benzene	71-43-2	8260D	ND		5.5	ug/kg	1
Bromodichloromethane	75-27-4	8260D	ND		5.5	ug/kg	1
Bromoform	75-25-2	8260D	ND		5.5	ug/kg	1
Bromomethane (Methyl bromide)	74-83-9	8260D	ND		5.5	ug/kg	1
2-Butanone (MEK)	78-93-3	8260D	46		22	ug/kg	1
Carbon disulfide	75-15-0	8260D	ND		5.5	ug/kg	1
Carbon tetrachloride	56-23-5	8260D	ND		5.5	ug/kg	1
Chlorobenzene	108-90-7	8260D	ND		5.5	ug/kg	1
Chloroethane	75-00-3	8260D	ND		5.5	ug/kg	1
Chloroform	67-66-3	8260D	ND		5.5	ug/kg	1
Chloromethane (Methyl chloride)	74-87-3	8260D	ND		5.5	ug/kg	1
Cyclohexane	110-82-7	8260D	ND		5.5	ug/kg	1
1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	8260D	ND		5.5	ug/kg	1
Dibromochloromethane	124-48-1	8260D	ND		5.5	ug/kg	1
1,2-Dibromoethane (EDB)	106-93-4	8260D	ND		5.5	ug/kg	1
1,2-Dichlorobenzene	95-50-1	8260D	ND		5.5	ug/kg	1
1,3-Dichlorobenzene	541-73-1	8260D	ND		5.5	ug/kg	1
1,4-Dichlorobenzene	106-46-7	8260D	ND		5.5	ug/kg	1
Dichlorodifluoromethane	75-71-8	8260D	ND		5.5	ug/kg	1
1,1-Dichloroethane	75-34-3	8260D	ND		5.5	ug/kg	1
1,2-Dichloroethane	107-06-2	8260D	ND		5.5	ug/kg	1
1,1-Dichloroethene	75-35-4	8260D	ND		5.5	ug/kg	1
cis-1,2-Dichloroethene	156-59-2	8260D	ND		5.5	ug/kg	1
trans-1,2-Dichloroethene	156-60-5	8260D	ND		5.5	ug/kg	1
1,2-Dichloropropane	78-87-5	8260D	ND		5.5	ug/kg	1
cis-1,3-Dichloropropene	10061-01-5	8260D	ND		5.5	ug/kg	1
trans-1,3-Dichloropropene	10061-02-6	8260D	ND		5.5	ug/kg	1
Ethylbenzene	100-41-4	8260D	ND		5.5	ug/kg	1
2-Hexanone	591-78-6	8260D	ND		11	ug/kg	1
Isopropylbenzene	98-82-8	8260D	ND		5.5	ug/kg	1
Methyl acetate	79-20-9	8260D	ND		5.5	ug/kg	1
Methyl tertiary butyl ether (MTBE)	1634-04-4	8260D	ND		5.5	ug/kg	1
4-Methyl-2-pentanone	108-10-1	8260D	ND		11	ug/kg	1
Methylcyclohexane	108-87-2	8260D	ND		5.5	ug/kg	1
Methylene chloride	75-09-2	8260D	ND		5.5	ug/kg	1
Styrene	100-42-5	8260D	ND		5.5	ug/kg	1
1,1,2,2-Tetrachloroethane	79-34-5	8260D	ND		5.5	ug/kg	1
Tetrachloroethene	127-18-4	8260D	ND		5.5	ug/kg	1
Toluene	108-88-3	8260D	ND		5.5	ug/kg	1
1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	8260D	ND		5.5	ug/kg	1
1,2,4-Trichlorobenzene	120-82-1	8260D	ND		5.5	ug/kg	1
1,1,1-Trichloroethane	71-55-6	8260D	ND		5.5	ug/kg	1
1,1,2-Trichloroethane	79-00-5	8260D	ND		5.5	ug/kg	1

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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# Volatile Organic Compounds by GC/MS

Client: Westinghouse Electric Company	Laboratory ID: WC09074-010
Description: SED-66-12-24	Matrix: Solid
Date Sampled: 03/09/2021 1215	Project Name: Westinghouse RI Q2
Date Received: 03/09/2021	Project Number:
	% Solids: 47.2 03/11/2021 0002

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch	Sample Wt.(g)
1	5035	8260D	1	03/11/2021 1829	JM1		85405	4.56

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Trichloroethene	79-01-6	8260D	ND		5.5	ug/kg	1
Trichlorofluoromethane	75-69-4	8260D	ND		5.5	ug/kg	1
Vinyl chloride	75-01-4	8260D	ND		5.5	ug/kg	1
Xylenes (total)	1330-20-7	8260D	ND		11	ug/kg	1

Surrogate	Q	Run 1 % Recovery	Acceptance Limits
Bromofluorobenzene		93	47-138
1,2-Dichloroethane-d4		95	53-142
Toluene-d8		113	68-124

LOQ = Limit of Quantitation      B = Detected in the method blank      E = Quantitation of compound exceeded the calibration range  
 ND = Not detected at or above the LOQ      N = Recovery is out of criteria      P = The RPD between two GC columns exceeds 40%  
 H = Out of holding time      W = Reported on wet weight basis

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## QC Summary

# Inorganic non-metals - MB

Sample ID: WQ85610-001

Matrix: Solid

Batch: 85610

Analytical Method: 9056A

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Nitrate - N (soluble)	ND		1	0.50	mg/kg	03/12/2021 0945

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - LCS

Sample ID: WQ85610-002

Matrix: Solid

Batch: 85610

Analytical Method: 9056A

Parameter	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	0.80	0.82		1	103	80-120	03/12/2021 1004

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Inorganic non-metals - MS

Sample ID: WC09074-010MS

Matrix: Solid

Batch: 85610

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Nitrate - N (soluble)	ND	4.0	3.6		1	89	80-120	03/12/2021 1657

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Inorganic non-metals - MSD

Sample ID: WC09074-010MD

Matrix: Solid

Batch: 85610

Analytical Method: 9056A

Parameter	Sample Amount (mg/kg)	Spike Amount (mg/kg)	Result (mg/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Nitrate - N (soluble)	ND	4.0	3.7		1	91	2.9	80-120	20	03/12/2021 1716

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ85405-001

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	03/11/2021 1000
Benzene	ND		1	5.0	ug/kg	03/11/2021 1000
Bromodichloromethane	ND		1	5.0	ug/kg	03/11/2021 1000
Bromoform	ND		1	5.0	ug/kg	03/11/2021 1000
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	03/11/2021 1000
2-Butanone (MEK)	ND		1	20	ug/kg	03/11/2021 1000
Carbon disulfide	ND		1	5.0	ug/kg	03/11/2021 1000
Carbon tetrachloride	ND		1	5.0	ug/kg	03/11/2021 1000
Chlorobenzene	ND		1	5.0	ug/kg	03/11/2021 1000
Chloroethane	ND		1	5.0	ug/kg	03/11/2021 1000
Chloroform	ND		1	5.0	ug/kg	03/11/2021 1000
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	03/11/2021 1000
Cyclohexane	ND		1	5.0	ug/kg	03/11/2021 1000
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	03/11/2021 1000
Dibromochloromethane	ND		1	5.0	ug/kg	03/11/2021 1000
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	03/11/2021 1000
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	03/11/2021 1000
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	03/11/2021 1000
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	03/11/2021 1000
Dichlorodifluoromethane	ND		1	5.0	ug/kg	03/11/2021 1000
1,1-Dichloroethane	ND		1	5.0	ug/kg	03/11/2021 1000
1,2-Dichloroethane	ND		1	5.0	ug/kg	03/11/2021 1000
1,1-Dichloroethene	ND		1	5.0	ug/kg	03/11/2021 1000
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	03/11/2021 1000
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	03/11/2021 1000
1,2-Dichloropropane	ND		1	5.0	ug/kg	03/11/2021 1000
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	03/11/2021 1000
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	03/11/2021 1000
Ethylbenzene	ND		1	5.0	ug/kg	03/11/2021 1000
2-Hexanone	ND		1	10	ug/kg	03/11/2021 1000
Isopropylbenzene	ND		1	5.0	ug/kg	03/11/2021 1000
Methyl acetate	ND		1	5.0	ug/kg	03/11/2021 1000
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	03/11/2021 1000
4-Methyl-2-pentanone	ND		1	10	ug/kg	03/11/2021 1000
Methylcyclohexane	ND		1	5.0	ug/kg	03/11/2021 1000
Methylene chloride	ND		1	5.0	ug/kg	03/11/2021 1000
Styrene	ND		1	5.0	ug/kg	03/11/2021 1000
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	03/11/2021 1000
Tetrachloroethene	ND		1	5.0	ug/kg	03/11/2021 1000
Toluene	ND		1	5.0	ug/kg	03/11/2021 1000
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	03/11/2021 1000
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	03/11/2021 1000
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	03/11/2021 1000
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	03/11/2021 1000

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ85405-001

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	03/11/2021 1000
Trichlorofluoromethane	ND		1	5.0	ug/kg	03/11/2021 1000
Vinyl chloride	ND		1	5.0	ug/kg	03/11/2021 1000
Xylenes (total)	ND		1	10	ug/kg	03/11/2021 1000
Surrogate	Q	% Rec	Acceptance Limit			
Bromofluorobenzene		105	47-138			
1,2-Dichloroethane-d4		96	53-142			
Toluene-d8		101	68-124			

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

\* = RSD is out of criteria

P = The RPD between two GC columns exceeds 40%

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ85405-002

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	110		1	114	60-140	03/11/2021 0915
Benzene	50	53		1	106	70-130	03/11/2021 0915
Bromodichloromethane	50	55		1	110	70-130	03/11/2021 0915
Bromoform	50	53		1	106	70-130	03/11/2021 0915
Bromomethane (Methyl bromide)	50	53		1	105	70-130	03/11/2021 0915
2-Butanone (MEK)	100	110		1	106	60-140	03/11/2021 0915
Carbon disulfide	50	55		1	111	70-130	03/11/2021 0915
Carbon tetrachloride	50	52		1	104	70-130	03/11/2021 0915
Chlorobenzene	50	51		1	102	70-130	03/11/2021 0915
Chloroethane	50	55		1	109	70-130	03/11/2021 0915
Chloroform	50	52		1	103	70-130	03/11/2021 0915
Chloromethane (Methyl chloride)	50	45		1	91	60-140	03/11/2021 0915
Cyclohexane	50	43		1	86	70-130	03/11/2021 0915
1,2-Dibromo-3-chloropropane (DBCP)	50	48		1	95	70-130	03/11/2021 0915
Dibromochloromethane	50	54		1	107	70-130	03/11/2021 0915
1,2-Dibromoethane (EDB)	50	52		1	105	70-130	03/11/2021 0915
1,2-Dichlorobenzene	50	47		1	95	70-130	03/11/2021 0915
1,3-Dichlorobenzene	50	48		1	96	70-130	03/11/2021 0915
1,4-Dichlorobenzene	50	49		1	97	70-130	03/11/2021 0915
Dichlorodifluoromethane	50	40		1	80	60-140	03/11/2021 0915
1,1-Dichloroethane	50	54		1	108	70-130	03/11/2021 0915
1,2-Dichloroethane	50	53		1	105	70-130	03/11/2021 0915
1,1-Dichloroethene	50	52		1	104	70-130	03/11/2021 0915
cis-1,2-Dichloroethene	50	51		1	103	70-130	03/11/2021 0915
trans-1,2-Dichloroethene	50	53		1	106	70-130	03/11/2021 0915
1,2-Dichloropropane	50	52		1	105	70-130	03/11/2021 0915
cis-1,3-Dichloropropene	50	55		1	111	70-130	03/11/2021 0915
trans-1,3-Dichloropropene	50	53		1	107	70-130	03/11/2021 0915
Ethylbenzene	50	54		1	108	70-130	03/11/2021 0915
2-Hexanone	100	100		1	104	70-130	03/11/2021 0915
Isopropylbenzene	50	54		1	108	70-130	03/11/2021 0915
Methyl acetate	50	47		1	93	70-130	03/11/2021 0915
Methyl tertiary butyl ether (MTBE)	50	52		1	103	70-130	03/11/2021 0915
4-Methyl-2-pentanone	100	100		1	100	70-130	03/11/2021 0915
Methylcyclohexane	50	47		1	93	70-130	03/11/2021 0915
Methylene chloride	50	50		1	101	70-130	03/11/2021 0915
Styrene	50	52		1	105	70-130	03/11/2021 0915
1,1,2,2-Tetrachloroethane	50	47		1	94	70-130	03/11/2021 0915
Tetrachloroethene	50	56		1	112	70-130	03/11/2021 0915
Toluene	50	53		1	107	70-130	03/11/2021 0915
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	47		1	94	70-130	03/11/2021 0915
1,2,4-Trichlorobenzene	50	58		1	115	70-130	03/11/2021 0915
1,1,1-Trichloroethane	50	54		1	109	70-130	03/11/2021 0915
1,1,2-Trichloroethane	50	50		1	100	70-130	03/11/2021 0915

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ85405-002

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	58		1	115	70-130	03/11/2021 0915
Trichlorofluoromethane	50	50		1	99	70-130	03/11/2021 0915
Vinyl chloride	50	45		1	90	70-130	03/11/2021 0915
Xylenes (total)	100	110		1	108	70-130	03/11/2021 0915
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		105			47-138		
1,2-Dichloroethane-d4		102			53-142		
Toluene-d8		105			68-124		

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: WC09074-010MS

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	160	120	340	N	1	144	70-130	03/11/2021 1852
Benzene	ND	62	69		1	111	70-130	03/11/2021 1852
Bromodichloromethane	ND	62	69		1	112	70-130	03/11/2021 1852
Bromoform	ND	62	62		1	100	70-130	03/11/2021 1852
Bromomethane (Methyl bromide)	ND	62	69		1	112	70-130	03/11/2021 1852
2-Butanone (MEK)	46	120	200		1	121	70-130	03/11/2021 1852
Carbon disulfide	ND	62	74		1	120	70-130	03/11/2021 1852
Carbon tetrachloride	ND	62	68		1	110	70-130	03/11/2021 1852
Chlorobenzene	ND	62	64		1	104	70-130	03/11/2021 1852
Chloroethane	ND	62	73		1	118	70-130	03/11/2021 1852
Chloroform	ND	62	68		1	110	70-130	03/11/2021 1852
Chloromethane (Methyl chloride)	ND	62	62		1	100	60-140	03/11/2021 1852
Cyclohexane	ND	62	69		1	111	70-130	03/11/2021 1852
1,2-Dibromo-3-chloropropane (DBCP)	ND	62	71		1	115	70-130	03/11/2021 1852
Dibromochloromethane	ND	62	68		1	110	70-130	03/11/2021 1852
1,2-Dibromoethane (EDB)	ND	62	70		1	113	70-130	03/11/2021 1852
1,2-Dichlorobenzene	ND	62	61		1	99	70-130	03/11/2021 1852
1,3-Dichlorobenzene	ND	62	66		1	107	70-130	03/11/2021 1852
1,4-Dichlorobenzene	ND	62	65		1	105	70-130	03/11/2021 1852
Dichlorodifluoromethane	ND	62	70		1	114	60-140	03/11/2021 1852
1,1-Dichloroethane	ND	62	71		1	115	70-130	03/11/2021 1852
1,2-Dichloroethane	ND	62	69		1	112	70-130	03/11/2021 1852
1,1-Dichloroethene	ND	62	71		1	114	70-130	03/11/2021 1852
cis-1,2-Dichloroethene	ND	62	67		1	109	70-130	03/11/2021 1852
trans-1,2-Dichloroethene	ND	62	69		1	112	70-130	03/11/2021 1852
1,2-Dichloropropane	ND	62	68		1	111	70-130	03/11/2021 1852
cis-1,3-Dichloropropene	ND	62	65		1	105	70-130	03/11/2021 1852
trans-1,3-Dichloropropene	ND	62	67		1	109	70-130	03/11/2021 1852
Ethylbenzene	ND	62	68		1	110	70-130	03/11/2021 1852
2-Hexanone	ND	120	140		1	113	70-130	03/11/2021 1852
Isopropylbenzene	ND	62	65		1	106	70-130	03/11/2021 1852
Methyl acetate	ND	62	89	N	1	144	70-130	03/11/2021 1852
Methyl tertiary butyl ether (MTBE)	ND	62	67		1	108	70-130	03/11/2021 1852
4-Methyl-2-pentanone	ND	120	130		1	106	70-130	03/11/2021 1852
Methylcyclohexane	ND	62	77		1	125	70-130	03/11/2021 1852
Methylene chloride	ND	62	68		1	110	70-130	03/11/2021 1852
Styrene	ND	62	56		1	91	70-130	03/11/2021 1852
1,1,2,2-Tetrachloroethane	ND	62	80		1	130	70-130	03/11/2021 1852
Tetrachloroethene	ND	62	76		1	124	70-130	03/11/2021 1852
Toluene	ND	62	72		1	117	70-130	03/11/2021 1852
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	62	79		1	127	70-130	03/11/2021 1852
1,2,4-Trichlorobenzene	ND	62	48		1	78	70-130	03/11/2021 1852
1,1,1-Trichloroethane	ND	62	71		1	115	70-130	03/11/2021 1852
1,1,2-Trichloroethane	ND	62	68		1	111	70-130	03/11/2021 1852

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MS

Sample ID: WC09074-010MS

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	ND	62	73		1	119	70-130	03/11/2021 1852
Trichlorofluoromethane	ND	62	78		1	127	70-130	03/11/2021 1852
Vinyl chloride	ND	62	64		1	104	70-130	03/11/2021 1852
Xylenes (total)	ND	120	130		1	108	70-130	03/11/2021 1852
Surrogate	Q	% Rec	Acceptance Limit					
Bromofluorobenzene		94	47-138					
1,2-Dichloroethane-d4		95	53-142					
Toluene-d8		113	68-124					

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MSD

Sample ID: WC09074-010MD

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	160	110	340	N	1	153	0.82	70-130	20	03/11/2021 1915
Benzene	ND	57	64		1	111	7.4	70-130	20	03/11/2021 1915
Bromodichloromethane	ND	57	60		1	105	13	70-130	20	03/11/2021 1915
Bromoform	ND	57	54		1	94	14	70-130	20	03/11/2021 1915
Bromomethane (Methyl bromide)	ND	57	66		1	116	4.1	70-130	20	03/11/2021 1915
2-Butanone (MEK)	46	110	180		1	121	6.0	70-130	20	03/11/2021 1915
Carbon disulfide	ND	57	73		1	128	1.3	70-130	20	03/11/2021 1915
Carbon tetrachloride	ND	57	62		1	109	9.1	70-130	20	03/11/2021 1915
Chlorobenzene	ND	57	56		1	98	13	70-130	20	03/11/2021 1915
Chloroethane	ND	57	72		1	126	1.3	70-130	20	03/11/2021 1915
Chloroform	ND	57	63		1	110	7.1	70-130	20	03/11/2021 1915
Chloromethane (Methyl chloride)	ND	57	62		1	108	0.047	60-140	20	03/11/2021 1915
Cyclohexane	ND	57	64		1	112	7.5	70-130	20	03/11/2021 1915
1,2-Dibromo-3-chloropropane (DBCP)	ND	57	75	N	1	132	6.2	70-130	20	03/11/2021 1915
Dibromochloromethane	ND	57	62		1	108	9.2	70-130	20	03/11/2021 1915
1,2-Dibromoethane (EDB)	ND	57	66		1	116	5.5	70-130	20	03/11/2021 1915
1,2-Dichlorobenzene	ND	57	52		1	91	16	70-130	20	03/11/2021 1915
1,3-Dichlorobenzene	ND	57	54		1	94	20	70-130	20	03/11/2021 1915
1,4-Dichlorobenzene	ND	57	52	+	1	91	21	70-130	20	03/11/2021 1915
Dichlorodifluoromethane	ND	57	69		1	121	1.7	60-140	20	03/11/2021 1915
1,1-Dichloroethane	ND	57	67		1	118	5.0	70-130	20	03/11/2021 1915
1,2-Dichloroethane	ND	57	63		1	109	9.6	70-130	20	03/11/2021 1915
1,1-Dichloroethene	ND	57	69		1	121	2.4	70-130	20	03/11/2021 1915
cis-1,2-Dichloroethene	ND	57	64		1	111	5.4	70-130	20	03/11/2021 1915
trans-1,2-Dichloroethene	ND	57	66		1	116	4.6	70-130	20	03/11/2021 1915
1,2-Dichloropropane	ND	57	62		1	108	10	70-130	20	03/11/2021 1915
cis-1,3-Dichloropropene	ND	57	54		1	94	19	70-130	20	03/11/2021 1915
trans-1,3-Dichloropropene	ND	57	61		1	107	9.9	70-130	20	03/11/2021 1915
Ethylbenzene	ND	57	58		1	101	16	70-130	20	03/11/2021 1915
2-Hexanone	ND	110	140		1	122	0.28	70-130	20	03/11/2021 1915
Isopropylbenzene	ND	57	52	+	1	91	23	70-130	20	03/11/2021 1915
Methyl acetate	ND	57	84	N	1	147	5.6	70-130	20	03/11/2021 1915
Methyl tertiary butyl ether (MTBE)	ND	57	60		1	105	11	70-130	20	03/11/2021 1915
4-Methyl-2-pentanone	ND	110	120		1	102	12	70-130	20	03/11/2021 1915
Methylcyclohexane	ND	57	69		1	121	11	70-130	20	03/11/2021 1915
Methylene chloride	ND	57	64		1	112	6.0	70-130	20	03/11/2021 1915
Styrene	ND	57	39	N,+	1	67	37	70-130	20	03/11/2021 1915
1,1,2,2-Tetrachloroethane	ND	57	86	N	1	150	6.2	70-130	20	03/11/2021 1915
Tetrachloroethene	ND	57	68		1	119	11	70-130	20	03/11/2021 1915
Toluene	ND	57	70		1	122	3.5	70-130	20	03/11/2021 1915
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	57	77	N	1	135	2.0	70-130	20	03/11/2021 1915
1,2,4-Trichlorobenzene	ND	57	36	N,+	1	63	29	70-130	20	03/11/2021 1915
1,1,1-Trichloroethane	ND	57	69		1	120	3.8	70-130	20	03/11/2021 1915
1,1,2-Trichloroethane	ND	57	66		1	116	3.0	70-130	20	03/11/2021 1915

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MSD

Sample ID: WC09074-010MD

Matrix: Solid

Batch: 85405

Prep Method: 5035

Analytical Method: 8260D

Parameter	Sample Amount (ug/kg)	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date	
Trichloroethene	ND	57	66		1	115	10	70-130	20	03/11/2021 1915	
Trichlorofluoromethane	ND	57	77	N	1	134	2.3	70-130	20	03/11/2021 1915	
Vinyl chloride	ND	57	65		1	114	1.4	70-130	20	03/11/2021 1915	
Xylenes (total)	ND	110	110		1	97	18	70-130	20	03/11/2021 1915	
Surrogate	Q	% Rec	Acceptance Limit								
Bromofluorobenzene		90	47-138								
1,2-Dichloroethane-d4		92	53-142								
Toluene-d8		122	68-124								

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ85546-001

Matrix: Solid

Batch: 85546

Prep Method: 5035

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Benzene	ND		1	5.0	ug/kg	03/12/2021 1005
Bromodichloromethane	ND		1	5.0	ug/kg	03/12/2021 1005
Bromoform	ND		1	5.0	ug/kg	03/12/2021 1005
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	03/12/2021 1005
Carbon disulfide	ND		1	5.0	ug/kg	03/12/2021 1005
Carbon tetrachloride	ND		1	5.0	ug/kg	03/12/2021 1005
Chlorobenzene	ND		1	5.0	ug/kg	03/12/2021 1005
Chloroethane	ND		1	5.0	ug/kg	03/12/2021 1005
Chloroform	ND		1	5.0	ug/kg	03/12/2021 1005
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	03/12/2021 1005
Cyclohexane	ND		1	5.0	ug/kg	03/12/2021 1005
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	03/12/2021 1005
Dibromochloromethane	ND		1	5.0	ug/kg	03/12/2021 1005
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	03/12/2021 1005
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	03/12/2021 1005
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	03/12/2021 1005
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	03/12/2021 1005
Dichlorodifluoromethane	ND		1	5.0	ug/kg	03/12/2021 1005
1,1-Dichloroethane	ND		1	5.0	ug/kg	03/12/2021 1005
1,2-Dichloroethane	ND		1	5.0	ug/kg	03/12/2021 1005
1,1-Dichloroethene	ND		1	5.0	ug/kg	03/12/2021 1005
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	03/12/2021 1005
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	03/12/2021 1005
1,2-Dichloropropane	ND		1	5.0	ug/kg	03/12/2021 1005
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	03/12/2021 1005
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	03/12/2021 1005
Ethylbenzene	ND		1	5.0	ug/kg	03/12/2021 1005
2-Hexanone	ND		1	10	ug/kg	03/12/2021 1005
Isopropylbenzene	ND		1	5.0	ug/kg	03/12/2021 1005
Methyl acetate	ND		1	5.0	ug/kg	03/12/2021 1005
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	03/12/2021 1005
4-Methyl-2-pentanone	ND		1	10	ug/kg	03/12/2021 1005
Methylcyclohexane	ND		1	5.0	ug/kg	03/12/2021 1005
Methylene chloride	ND		1	5.0	ug/kg	03/12/2021 1005
Styrene	ND		1	5.0	ug/kg	03/12/2021 1005
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	03/12/2021 1005
Tetrachloroethene	ND		1	5.0	ug/kg	03/12/2021 1005
Toluene	ND		1	5.0	ug/kg	03/12/2021 1005
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	03/12/2021 1005
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	03/12/2021 1005
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	03/12/2021 1005
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	03/12/2021 1005
Trichloroethene	ND		1	5.0	ug/kg	03/12/2021 1005
Trichlorofluoromethane	ND		1	5.0	ug/kg	03/12/2021 1005

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ85546-001

Matrix: Solid

Batch: 85546

Prep Method: 5035

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Vinyl chloride	ND		1	5.0	ug/kg	03/12/2021 1005
Xylenes (total)	ND		1	10	ug/kg	03/12/2021 1005
Surrogate	Q	% Rec	Acceptance Limit			
Bromofluorobenzene		108	47-138			
1,2-Dichloroethane-d4		97	53-142			
Toluene-d8		111	68-124			

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

\* = RSD is out of criteria

P = The RPD between two GC columns exceeds 40%

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ85546-002

Matrix: Solid

Batch: 85546

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Benzene	50	49		1	97	70-130	03/12/2021 0917
Bromodichloromethane	50	52		1	104	70-130	03/12/2021 0917
Bromoform	50	50		1	100	70-130	03/12/2021 0917
Bromomethane (Methyl bromide)	50	50		1	100	70-130	03/12/2021 0917
Carbon disulfide	50	49		1	98	70-130	03/12/2021 0917
Carbon tetrachloride	50	48		1	95	70-130	03/12/2021 0917
Chlorobenzene	50	48		1	96	70-130	03/12/2021 0917
Chloroethane	50	50		1	101	70-130	03/12/2021 0917
Chloroform	50	47		1	95	70-130	03/12/2021 0917
Chloromethane (Methyl chloride)	50	49		1	97	60-140	03/12/2021 0917
Cyclohexane	50	42		1	83	70-130	03/12/2021 0917
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	70-130	03/12/2021 0917
Dibromochloromethane	50	50		1	101	70-130	03/12/2021 0917
1,2-Dibromoethane (EDB)	50	50		1	99	70-130	03/12/2021 0917
1,2-Dichlorobenzene	50	46		1	92	70-130	03/12/2021 0917
1,3-Dichlorobenzene	50	46		1	92	70-130	03/12/2021 0917
1,4-Dichlorobenzene	50	47		1	94	70-130	03/12/2021 0917
Dichlorodifluoromethane	50	44		1	88	60-140	03/12/2021 0917
1,1-Dichloroethane	50	49		1	97	70-130	03/12/2021 0917
1,2-Dichloroethane	50	49		1	97	70-130	03/12/2021 0917
1,1-Dichloroethene	50	47		1	94	70-130	03/12/2021 0917
cis-1,2-Dichloroethene	50	47		1	95	70-130	03/12/2021 0917
trans-1,2-Dichloroethene	50	48		1	96	70-130	03/12/2021 0917
1,2-Dichloropropane	50	49		1	99	70-130	03/12/2021 0917
cis-1,3-Dichloropropene	50	51		1	102	70-130	03/12/2021 0917
trans-1,3-Dichloropropene	50	51		1	102	70-130	03/12/2021 0917
Ethylbenzene	50	51		1	101	70-130	03/12/2021 0917
2-Hexanone	100	82		1	82	70-130	03/12/2021 0917
Isopropylbenzene	50	52		1	103	70-130	03/12/2021 0917
Methyl acetate	50	45		1	90	70-130	03/12/2021 0917
Methyl tertiary butyl ether (MTBE)	50	47		1	94	70-130	03/12/2021 0917
4-Methyl-2-pentanone	100	92		1	92	70-130	03/12/2021 0917
Methylcyclohexane	50	44		1	88	70-130	03/12/2021 0917
Methylene chloride	50	46		1	91	70-130	03/12/2021 0917
Styrene	50	50		1	101	70-130	03/12/2021 0917
1,1,2,2-Tetrachloroethane	50	47		1	94	70-130	03/12/2021 0917
Tetrachloroethene	50	52		1	104	70-130	03/12/2021 0917
Toluene	50	50		1	100	70-130	03/12/2021 0917
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	43		1	87	70-130	03/12/2021 0917
1,2,4-Trichlorobenzene	50	53		1	106	70-130	03/12/2021 0917
1,1,1-Trichloroethane	50	49		1	98	70-130	03/12/2021 0917
1,1,2-Trichloroethane	50	48		1	96	70-130	03/12/2021 0917
Trichloroethene	50	53		1	106	70-130	03/12/2021 0917
Trichlorofluoromethane	50	46		1	93	70-130	03/12/2021 0917

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ85546-002

Matrix: Solid

Batch: 85546

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Vinyl chloride	50	49		1	97	70-130	03/12/2021 0917
Xylenes (total)	100	100		1	103	70-130	03/12/2021 0917
Surrogate	Q	% Rec	Acceptance Limit				
Bromofluorobenzene		101	47-138				
1,2-Dichloroethane-d4		94	53-142				
Toluene-d8		102	68-124				

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: WQ85546-003

Matrix: Solid

Batch: 85546

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Benzene	50	49		1	97	0.021	70-130	20	03/12/2021 0941
Bromodichloromethane	50	53		1	105	1.7	70-130	20	03/12/2021 0941
Bromoform	50	52		1	103	3.2	70-130	20	03/12/2021 0941
Bromomethane (Methyl bromide)	50	49		1	98	2.6	70-130	20	03/12/2021 0941
Carbon disulfide	50	47		1	95	3.4	70-130	20	03/12/2021 0941
Carbon tetrachloride	50	46		1	92	4.0	70-130	20	03/12/2021 0941
Chlorobenzene	50	48		1	96	0.11	70-130	20	03/12/2021 0941
Chloroethane	50	48		1	96	4.4	70-130	20	03/12/2021 0941
Chloroform	50	47		1	94	0.46	70-130	20	03/12/2021 0941
Chloromethane (Methyl chloride)	50	47		1	95	2.8	60-140	20	03/12/2021 0941
Cyclohexane	50	40		1	80	3.9	70-130	20	03/12/2021 0941
1,2-Dibromo-3-chloropropane (DBCP)	50	49		1	98	4.1	70-130	20	03/12/2021 0941
Dibromochloromethane	50	51		1	103	1.9	70-130	20	03/12/2021 0941
1,2-Dibromoethane (EDB)	50	51		1	102	2.7	70-130	20	03/12/2021 0941
1,2-Dichlorobenzene	50	47		1	93	1.7	70-130	20	03/12/2021 0941
1,3-Dichlorobenzene	50	47		1	93	1.7	70-130	20	03/12/2021 0941
1,4-Dichlorobenzene	50	47		1	93	1.0	70-130	20	03/12/2021 0941
Dichlorodifluoromethane	50	42		1	85	3.9	60-140	20	03/12/2021 0941
1,1-Dichloroethane	50	48		1	95	2.2	70-130	20	03/12/2021 0941
1,2-Dichloroethane	50	49		1	98	1.1	70-130	20	03/12/2021 0941
1,1-Dichloroethene	50	45		1	90	3.7	70-130	20	03/12/2021 0941
cis-1,2-Dichloroethene	50	47		1	94	0.82	70-130	20	03/12/2021 0941
trans-1,2-Dichloroethene	50	46		1	93	3.4	70-130	20	03/12/2021 0941
1,2-Dichloropropane	50	50		1	101	2.1	70-130	20	03/12/2021 0941
cis-1,3-Dichloropropene	50	52		1	105	2.1	70-130	20	03/12/2021 0941
trans-1,3-Dichloropropene	50	52		1	104	1.9	70-130	20	03/12/2021 0941
Ethylbenzene	50	50		1	101	0.68	70-130	20	03/12/2021 0941
2-Hexanone	100	88		1	88	6.9	70-130	20	03/12/2021 0941
Isopropylbenzene	50	51		1	101	1.7	70-130	20	03/12/2021 0941
Methyl acetate	50	46		1	93	3.1	70-130	20	03/12/2021 0941
Methyl tertiary butyl ether (MTBE)	50	48		1	96	1.9	70-130	20	03/12/2021 0941
4-Methyl-2-pentanone	100	97		1	97	5.8	70-130	20	03/12/2021 0941
Methylcyclohexane	50	43		1	85	3.2	70-130	20	03/12/2021 0941
Methylene chloride	50	46		1	91	0.0066	70-130	20	03/12/2021 0941
Styrene	50	50		1	101	0.26	70-130	20	03/12/2021 0941
1,1,2,2-Tetrachloroethane	50	49		1	98	4.1	70-130	20	03/12/2021 0941
Tetrachloroethene	50	51		1	101	2.4	70-130	20	03/12/2021 0941
Toluene	50	50		1	100	0.46	70-130	20	03/12/2021 0941
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	41		1	83	4.4	70-130	20	03/12/2021 0941
1,2,4-Trichlorobenzene	50	54		1	108	1.4	70-130	20	03/12/2021 0941
1,1,1-Trichloroethane	50	48		1	96	2.4	70-130	20	03/12/2021 0941
1,1,2-Trichloroethane	50	49		1	98	3.0	70-130	20	03/12/2021 0941
Trichloroethene	50	52		1	105	0.69	70-130	20	03/12/2021 0941
Trichlorofluoromethane	50	45		1	89	3.9	70-130	20	03/12/2021 0941

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: WQ85546-003

Matrix: Solid

Batch: 85546

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Vinyl chloride	50	47		1	93	4.1	70-130	20	03/12/2021 0941
Xylenes (total)	100	100		1	102	0.82	70-130	20	03/12/2021 0941
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		101	47-138						
1,2-Dichloroethane-d4		95	53-142						
Toluene-d8		102	68-124						

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results



# Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ85816-001

Matrix: Solid

Batch: 85816

Prep Method: 5035

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Acetone	ND		1	20	ug/kg	03/16/2021 0929
Benzene	ND		1	5.0	ug/kg	03/16/2021 0929
Bromodichloromethane	ND		1	5.0	ug/kg	03/16/2021 0929
Bromoform	ND		1	5.0	ug/kg	03/16/2021 0929
Bromomethane (Methyl bromide)	ND		1	5.0	ug/kg	03/16/2021 0929
2-Butanone (MEK)	ND		1	20	ug/kg	03/16/2021 0929
Carbon disulfide	ND		1	5.0	ug/kg	03/16/2021 0929
Carbon tetrachloride	ND		1	5.0	ug/kg	03/16/2021 0929
Chlorobenzene	ND		1	5.0	ug/kg	03/16/2021 0929
Chloroethane	ND		1	5.0	ug/kg	03/16/2021 0929
Chloroform	ND		1	5.0	ug/kg	03/16/2021 0929
Chloromethane (Methyl chloride)	ND		1	5.0	ug/kg	03/16/2021 0929
Cyclohexane	ND		1	5.0	ug/kg	03/16/2021 0929
1,2-Dibromo-3-chloropropane (DBCP)	ND		1	5.0	ug/kg	03/16/2021 0929
Dibromochloromethane	ND		1	5.0	ug/kg	03/16/2021 0929
1,2-Dibromoethane (EDB)	ND		1	5.0	ug/kg	03/16/2021 0929
1,2-Dichlorobenzene	ND		1	5.0	ug/kg	03/16/2021 0929
1,3-Dichlorobenzene	ND		1	5.0	ug/kg	03/16/2021 0929
1,4-Dichlorobenzene	ND		1	5.0	ug/kg	03/16/2021 0929
Dichlorodifluoromethane	ND		1	5.0	ug/kg	03/16/2021 0929
1,1-Dichloroethane	ND		1	5.0	ug/kg	03/16/2021 0929
1,2-Dichloroethane	ND		1	5.0	ug/kg	03/16/2021 0929
1,1-Dichloroethene	ND		1	5.0	ug/kg	03/16/2021 0929
cis-1,2-Dichloroethene	ND		1	5.0	ug/kg	03/16/2021 0929
trans-1,2-Dichloroethene	ND		1	5.0	ug/kg	03/16/2021 0929
1,2-Dichloropropane	ND		1	5.0	ug/kg	03/16/2021 0929
cis-1,3-Dichloropropene	ND		1	5.0	ug/kg	03/16/2021 0929
trans-1,3-Dichloropropene	ND		1	5.0	ug/kg	03/16/2021 0929
Ethylbenzene	ND		1	5.0	ug/kg	03/16/2021 0929
2-Hexanone	ND		1	10	ug/kg	03/16/2021 0929
Isopropylbenzene	ND		1	5.0	ug/kg	03/16/2021 0929
Methyl acetate	ND		1	5.0	ug/kg	03/16/2021 0929
Methyl tertiary butyl ether (MTBE)	ND		1	5.0	ug/kg	03/16/2021 0929
4-Methyl-2-pentanone	ND		1	10	ug/kg	03/16/2021 0929
Methylcyclohexane	ND		1	5.0	ug/kg	03/16/2021 0929
Methylene chloride	ND		1	5.0	ug/kg	03/16/2021 0929
Styrene	ND		1	5.0	ug/kg	03/16/2021 0929
1,1,2,2-Tetrachloroethane	ND		1	5.0	ug/kg	03/16/2021 0929
Tetrachloroethene	ND		1	5.0	ug/kg	03/16/2021 0929
Toluene	ND		1	5.0	ug/kg	03/16/2021 0929
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		1	5.0	ug/kg	03/16/2021 0929
1,2,4-Trichlorobenzene	ND		1	5.0	ug/kg	03/16/2021 0929
1,1,1-Trichloroethane	ND		1	5.0	ug/kg	03/16/2021 0929
1,1,2-Trichloroethane	ND		1	5.0	ug/kg	03/16/2021 0929

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - MB

Sample ID: WQ85816-001

Matrix: Solid

Batch: 85816

Prep Method: 5035

Analytical Method: 8260D

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Trichloroethene	ND		1	5.0	ug/kg	03/16/2021 0929
Trichlorofluoromethane	ND		1	5.0	ug/kg	03/16/2021 0929
Vinyl chloride	ND		1	5.0	ug/kg	03/16/2021 0929
Xylenes (total)	ND		1	10	ug/kg	03/16/2021 0929
Surrogate	Q	% Rec	Acceptance Limit			
Bromofluorobenzene		115	47-138			
1,2-Dichloroethane-d4		105	53-142			
Toluene-d8		113	68-124			

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

\* = RSD is out of criteria

P = The RPD between two GC columns exceeds 40%

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ85816-002

Matrix: Solid

Batch: 85816

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Acetone	100	120		1	115	60-140	03/16/2021 0757
Benzene	50	54		1	108	70-130	03/16/2021 0757
Bromodichloromethane	50	60		1	120	70-130	03/16/2021 0757
Bromoform	50	54		1	109	70-130	03/16/2021 0757
Bromomethane (Methyl bromide)	50	59		1	118	70-130	03/16/2021 0757
2-Butanone (MEK)	100	110		1	107	60-140	03/16/2021 0757
Carbon disulfide	50	56		1	113	70-130	03/16/2021 0757
Carbon tetrachloride	50	58		1	116	70-130	03/16/2021 0757
Chlorobenzene	50	49		1	98	70-130	03/16/2021 0757
Chloroethane	50	58		1	116	70-130	03/16/2021 0757
Chloroform	50	57		1	114	70-130	03/16/2021 0757
Chloromethane (Methyl chloride)	50	57		1	115	60-140	03/16/2021 0757
Cyclohexane	50	56		1	112	70-130	03/16/2021 0757
1,2-Dibromo-3-chloropropane (DBCP)	50	50		1	100	70-130	03/16/2021 0757
Dibromochloromethane	50	54		1	108	70-130	03/16/2021 0757
1,2-Dibromoethane (EDB)	50	53		1	106	70-130	03/16/2021 0757
1,2-Dichlorobenzene	50	46		1	93	70-130	03/16/2021 0757
1,3-Dichlorobenzene	50	47		1	94	70-130	03/16/2021 0757
1,4-Dichlorobenzene	50	47		1	95	70-130	03/16/2021 0757
Dichlorodifluoromethane	50	62		1	124	60-140	03/16/2021 0757
1,1-Dichloroethane	50	58		1	116	70-130	03/16/2021 0757
1,2-Dichloroethane	50	61		1	122	70-130	03/16/2021 0757
1,1-Dichloroethene	50	55		1	109	70-130	03/16/2021 0757
cis-1,2-Dichloroethene	50	57		1	113	70-130	03/16/2021 0757
trans-1,2-Dichloroethene	50	56		1	112	70-130	03/16/2021 0757
1,2-Dichloropropane	50	57		1	113	70-130	03/16/2021 0757
cis-1,3-Dichloropropene	50	60		1	120	70-130	03/16/2021 0757
trans-1,3-Dichloropropene	50	54		1	109	70-130	03/16/2021 0757
Ethylbenzene	50	53		1	105	70-130	03/16/2021 0757
2-Hexanone	100	96		1	96	70-130	03/16/2021 0757
Isopropylbenzene	50	52		1	103	70-130	03/16/2021 0757
Methyl acetate	50	58		1	115	70-130	03/16/2021 0757
Methyl tertiary butyl ether (MTBE)	50	59		1	117	70-130	03/16/2021 0757
4-Methyl-2-pentanone	100	110		1	113	70-130	03/16/2021 0757
Methylcyclohexane	50	57		1	114	70-130	03/16/2021 0757
Methylene chloride	50	55		1	109	70-130	03/16/2021 0757
Styrene	50	52		1	104	70-130	03/16/2021 0757
1,1,2,2-Tetrachloroethane	50	50		1	100	70-130	03/16/2021 0757
Tetrachloroethene	50	53		1	106	70-130	03/16/2021 0757
Toluene	50	56		1	113	70-130	03/16/2021 0757
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	59		1	118	70-130	03/16/2021 0757
1,2,4-Trichlorobenzene	50	52		1	104	70-130	03/16/2021 0757
1,1,1-Trichloroethane	50	59		1	118	70-130	03/16/2021 0757
1,1,2-Trichloroethane	50	51		1	103	70-130	03/16/2021 0757

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCS

Sample ID: WQ85816-002

Matrix: Solid

Batch: 85816

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Trichloroethene	50	58		1	116	70-130	03/16/2021 0757
Trichlorofluoromethane	50	62		1	124	70-130	03/16/2021 0757
Vinyl chloride	50	58		1	117	70-130	03/16/2021 0757
Xylenes (total)	100	110		1	105	70-130	03/16/2021 0757
Surrogate	Q	% Rec			Acceptance Limit		
Bromofluorobenzene		107			47-138		
1,2-Dichloroethane-d4		111			53-142		
Toluene-d8		117			68-124		

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: WQ85816-003

Matrix: Solid

Batch: 85816

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Acetone	100	75	+	1	75	42	60-140	20	03/16/2021 0842
Benzene	50	51		1	103	5.5	70-130	20	03/16/2021 0842
Bromodichloromethane	50	54		1	107	11	70-130	20	03/16/2021 0842
Bromoform	50	51		1	101	7.2	70-130	20	03/16/2021 0842
Bromomethane (Methyl bromide)	50	53		1	105	11	70-130	20	03/16/2021 0842
2-Butanone (MEK)	100	80	+	1	80	29	60-140	20	03/16/2021 0842
Carbon disulfide	50	52		1	105	7.5	70-130	20	03/16/2021 0842
Carbon tetrachloride	50	53		1	107	8.6	70-130	20	03/16/2021 0842
Chlorobenzene	50	50		1	100	1.3	70-130	20	03/16/2021 0842
Chloroethane	50	53		1	106	8.7	70-130	20	03/16/2021 0842
Chloroform	50	50		1	99	14	70-130	20	03/16/2021 0842
Chloromethane (Methyl chloride)	50	52		1	104	9.7	60-140	20	03/16/2021 0842
Cyclohexane	50	51		1	102	9.5	70-130	20	03/16/2021 0842
1,2-Dibromo-3-chloropropane (DBCP)	50	47		1	94	6.1	70-130	20	03/16/2021 0842
Dibromochloromethane	50	51		1	101	6.7	70-130	20	03/16/2021 0842
1,2-Dibromoethane (EDB)	50	49		1	98	7.8	70-130	20	03/16/2021 0842
1,2-Dichlorobenzene	50	46		1	92	1.1	70-130	20	03/16/2021 0842
1,3-Dichlorobenzene	50	47		1	93	1.1	70-130	20	03/16/2021 0842
1,4-Dichlorobenzene	50	48		1	96	2.0	70-130	20	03/16/2021 0842
Dichlorodifluoromethane	50	57		1	115	7.3	60-140	20	03/16/2021 0842
1,1-Dichloroethane	50	51		1	102	12	70-130	20	03/16/2021 0842
1,2-Dichloroethane	50	49	+	1	99	21	70-130	20	03/16/2021 0842
1,1-Dichloroethene	50	51		1	101	7.9	70-130	20	03/16/2021 0842
cis-1,2-Dichloroethene	50	49		1	99	14	70-130	20	03/16/2021 0842
trans-1,2-Dichloroethene	50	50		1	101	10	70-130	20	03/16/2021 0842
1,2-Dichloropropane	50	52		1	103	9.4	70-130	20	03/16/2021 0842
cis-1,3-Dichloropropene	50	53		1	106	12	70-130	20	03/16/2021 0842
trans-1,3-Dichloropropene	50	52		1	104	4.8	70-130	20	03/16/2021 0842
Ethylbenzene	50	53		1	107	1.4	70-130	20	03/16/2021 0842
2-Hexanone	100	85		1	85	13	70-130	20	03/16/2021 0842
Isopropylbenzene	50	55		1	109	5.2	70-130	20	03/16/2021 0842
Methyl acetate	50	45	+	1	90	24	70-130	20	03/16/2021 0842
Methyl tertiary butyl ether (MTBE)	50	48		1	96	20	70-130	20	03/16/2021 0842
4-Methyl-2-pentanone	100	95		1	95	18	70-130	20	03/16/2021 0842
Methylcyclohexane	50	55		1	111	2.7	70-130	20	03/16/2021 0842
Methylene chloride	50	47		1	94	15	70-130	20	03/16/2021 0842
Styrene	50	51		1	102	1.5	70-130	20	03/16/2021 0842
1,1,2,2-Tetrachloroethane	50	47		1	94	5.7	70-130	20	03/16/2021 0842
Tetrachloroethene	50	55		1	111	4.5	70-130	20	03/16/2021 0842
Toluene	50	53		1	106	5.8	70-130	20	03/16/2021 0842
1,1,2-Trichloro-1,2,2-Trifluoroethane	50	54		1	108	8.6	70-130	20	03/16/2021 0842
1,2,4-Trichlorobenzene	50	53		1	106	1.3	70-130	20	03/16/2021 0842
1,1,1-Trichloroethane	50	53		1	107	9.6	70-130	20	03/16/2021 0842
1,1,2-Trichloroethane	50	48		1	96	7.0	70-130	20	03/16/2021 0842

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

# Volatile Organic Compounds by GC/MS - LCSD

Sample ID: WQ85816-003

Matrix: Solid

Batch: 85816

Prep Method: 5035

Analytical Method: 8260D

Parameter	Spike Amount (ug/kg)	Result (ug/kg)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Trichloroethene	50	57		1	113	2.1	70-130	20	03/16/2021 0842
Trichlorofluoromethane	50	57		1	114	8.4	70-130	20	03/16/2021 0842
Vinyl chloride	50	55		1	109	6.6	70-130	20	03/16/2021 0842
Xylenes (total)	100	110		1	107	1.6	70-130	20	03/16/2021 0842
Surrogate	Q	% Rec	Acceptance Limit						
Bromofluorobenzene		104	47-138						
1,2-Dichloroethane-d4		97	53-142						
Toluene-d8		110	68-124						

LOQ = Limit of Quantitation

ND = Not detected at or above the LOQ

N = Recovery is out of criteria

P = The RPD between two GC columns exceeds 40%

\* = RSD is out of criteria

+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody  
and  
Miscellaneous Documents



**PACE ANALYTICAL SERVICES, LLC**  
 106 Vantage Point Drive • West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.pacelabs.com

**Number 118346**

Client <b>ALCOM</b>		Report to Contact <b>Jarvis Grant</b>		Telephone No. / Email <b>jarvis.g@alcom.com</b>		Quote No.	
Address <b>101 Reservoir Dr</b>		Sampler's Signature <i>[Signature]</i>		Analysis (Attach list if more space is needed)		Pages <b>1 of 2</b>	
City <b>Columbia</b>		Printed Name <b>Shawn Becker</b>		Barcode <b>WC09074</b>		Remains / Cooler I.D.	
State <b>SC</b>		Zip Code <b>29209</b>		Matrix		EMC	
Project Name <b>Westinghouse Pl II</b>		Project No.		No. of Containers by Preservative Type		Remains / Cooler I.D.	
Sample ID / Description (Serials for each sample may be combined on one line.)		Collection Time (Military)		Matrix		Remains / Cooler I.D.	
SED-68-0-6		1345		✓		✓	
SED-68-6-12		1430		✓		✓	
SED-68-12-24		1445		✓		✓	
SED-68-12-24-DUP		1445		✓		✓	
SED-67-0-6		1620		✓		✓	
SED-67-6-12		1630		✓		✓	
SED-67-12-24		1645		✓		✓	
SED-66-0-6		3/9/21		✓		✓	
SED-66-6-12		1200		✓		✓	
SED-66-12-24		1215		✓		✓	
Turn Around Time Required (Prior lab approval required for expedited TAT.)		Sample Disposal		Positive Material Identification		OC Requirements (Specify)	
Standard <input type="checkbox"/> Rush (Specify)		Return to Client <input type="checkbox"/> Dispose by Lab <input type="checkbox"/>		Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skip Initial <input type="checkbox"/> Poison <input type="checkbox"/> Unknown <input type="checkbox"/>			
1. Refiniquished by <i>[Signature]</i>		Date <b>3/9/21</b>		Time <b>1:29</b>		Date <b>3/9/21</b>	
2. Refiniquished by		Date		Time		Date	
3. Refiniquished by		Date		Time		Date	
4. Refiniquished by		Date		Time		Date	
Note: All samples are retained for four weeks from receipt unless other arrangements are made.		Laboratory received by <i>[Signature]</i>		Date <b>3/9/21</b>		Time <b>1729</b>	
		LAB USE ONLY		Temp Blank <input type="checkbox"/> Y <input type="checkbox"/> N		Receipt Temp <b>4.6</b> °C	

Document Number: MED09M2-01

DISTRIBUTION: WHITE & YELLOW Return to laboratory with Sample(s). PINK-Field/Client Copy





**PACE ANALYTICAL SERVICES, LLC**  
 106 Vantage Point Drive - West Columbia, SC 29172  
 Telephone No. 803-791-9700 Fax No. 803-791-9111  
 www.pacelabs.com

**Number 118347**

Client: <u>Heck</u>		Report to Contact: <u>James Grant</u>		Telephone No. / E-mail: <u>James.Grant@cedm.com</u>		Quote No.
Address: <u>101 Research Dr</u>		Sampler's Signature: <u>[Signature]</u>		Analysis (Attach with invoice space if needed)		Page <u>2</u> of <u>2</u>
City: <u>Columbia</u>	State: <u>SC</u>	Zip Code: <u>29209</u>	Printed Name: _____			
Project Name: <u>Wilmington Ph II</u>	Project No. _____					 <b>WC09074</b> BMS remains / Cooler Lid.
Sample ID / Description: <u>SFD-66-12-24-MS</u>	Collection Date(s): <u>3/9/21</u>	Collection Time (M/Day): <u>12:15 P</u>	No. of Containers by Preservative Type: HCL: <u>1</u> HNO <sub>3</sub> : <u>1</u> H <sub>2</sub> O <sub>2</sub> : <u>1</u> Other: <u>1</u>			
Project No. _____	Collection Date(s): <u>3/9/21</u>	Collection Time (M/Day): <u>12:15 P</u>	Membrane: P1: <u>X</u> P2: <u>X</u> P3: <u>X</u> P4: <u>X</u> P5: <u>X</u> P6: <u>X</u>			Possible Hazard Identification: <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Removable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown
Sample ID / Description: <u>SFD-66-12-24-MSD</u>	Collection Date(s): <u>3/9/21</u>	Collection Time (M/Day): <u>12:15 P</u>	1. Received by: _____ Date: _____ Time: _____ 2. Received by: _____ Date: _____ Time: _____ 3. Received by: _____ Date: _____ Time: _____ 4. Laboratory received by: <u>[Signature]</u> Date: <u>3/9/21</u> Time: <u>17:29</u>			
Turn Around Time Required (Prior lab approval required for expedited TAT): <input type="checkbox"/> Standard <input type="checkbox"/> Rush (Specify) _____ <input type="checkbox"/> Return to Client <input type="checkbox"/> Disposal by Lab						OC Requirements (Specify)
1. Requisitioned by: <u>[Signature]</u> Date: <u>3/9/2021</u> Time: <u>17:29</u>						Date: _____ Time: _____
2. Requisitioned by: _____ Date: _____ Time: _____						Date: _____ Time: _____
3. Requisitioned by: _____ Date: _____ Time: _____						Date: _____ Time: _____
4. Requisitioned by: _____ Date: _____ Time: _____						Date: _____ Time: _____
Note: All samples are retained for four weeks from receipt unless other arrangements are made.						Temp: <u>17.29</u> Temp Blank: <input type="checkbox"/> Y <input type="checkbox"/> N

Document Number: ME00002-01

DISTRIBUTION: WHITE & YELLOW-Return to laboratory with Sample(s), PINK-Field/Client Copy

# PACE ANALYTICAL SERVICES, LLC



**Samples Receipt Checklist (SRC) (ME0018C-15)**  
Issuing Authority: Pace ENV - WCOL

Revised: 9/29/2020  
Page 1 of 1

## Sample Receipt Checklist (SRC)

Client: AECOM/WESTINGHOUSE      Cooler Inspected by/date: JRG2 / 03/09/2021      Lot #: WC09074

Means of receipt: <input type="checkbox"/> Pace <input checked="" type="checkbox"/> Client <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other:	
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	1. Were custody seals present on the cooler?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	2. If custody seals were present, were they intact and unbroken?
pH Strip ID: NA      Chlorine Strip ID: NA      Tested by: NA	
Original temperature upon receipt / Derived (Corrected) temperature upon receipt:      %Solid Snap-Cup ID: 21-445 4.6 / 4.6 °C NA / NA °C NA / NA °C NA / NA °C	
Method: <input checked="" type="checkbox"/> Temperature Blank <input type="checkbox"/> Against Bottles      IR Gun ID: 6      IR Gun Correction Factor: 0 °C	
Method of coolant: <input checked="" type="checkbox"/> Wet Ice <input type="checkbox"/> Ice Packs <input type="checkbox"/> Dry Ice <input type="checkbox"/> None	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	4. Is the commercial courier's packing slip attached to this form?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5. Were proper custody procedures (relinquished/received) followed?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6. Were sample IDs listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7. Were sample IDs listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8. Was collection date & time listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9. Was collection date & time listed on all sample containers?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Did all container label information (ID, date, time) agree with the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	11. Were tests to be performed listed on the COC?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	13. Was adequate sample volume available?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼" or 6mm in diameter) in any of the VOA vials?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	19. Were all applicable NH <sub>4</sub> /TKN/cyanide/phenol/625.1/608.3 (< 0.5mg/L) samples free of residual chlorine?
<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	21. Was the quote number listed on the container label? If yes, Quote # 22307
<b>Sample Preservation</b> (Must be completed for any sample(s) incorrectly preserved or with headspace.)	
Sample(s) NA were received incorrectly preserved and were adjusted accordingly in sample receiving with NA mL of circle one: H2SO4, HNO3, HCl, NaOH using SR # NA	
Time of preservation NA. If more than one preservative is needed, please note in the comments below.	
Sample(s) NA were received with bubbles >6 mm in diameter.	
Samples(s) NA were received with TRC > 0.5 mg/L (if #19 is no) and were adjusted accordingly in sample receiving with sodium thiosulfate (Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> ) with Shealy ID: NA	
SR barcode labels applied by: JRG2      Date: 03/09/2021	

Comments:

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December 08, 2020

Ms. Cynthia Teague  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Sediment and GW Campaign  
Work Order: 527134

Dear Ms. Teague:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 11, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

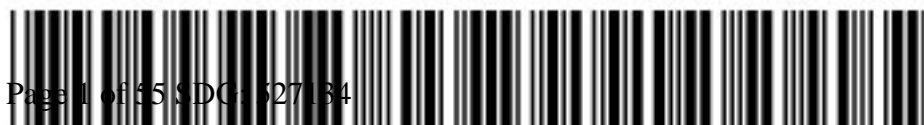
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500775170  
Enclosures



## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC009 Westinghouse Electric Co, LLC (4500778461)

Client SDG: 527134 GEL Work Order: 527134

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Lindsay Fabra.

Reviewed by \_\_\_\_\_

*Lindsay Fabra*



## Analytical Detections Summary

<b>SDG/Report#</b>	527134	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
527134001	SED-22P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.24 pCi/g	
			13968-55-3/1	Uranium-233/234	6.21 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	15117-96-1/1	Uranium-235/236	0.257 pCi/g	
			3982-70-2			
			7664-41-7	Nitrogen, Ammonia	531 mg/kg	
527134002	SED-22P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.971 pCi/g	
			13968-55-3/1	Uranium-233/234	1.97 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	386 mg/kg	
			16984-48-8	Fluoride	6.95 mg/kg	
527134003	SED-22P2-12-24	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.838 pCi/g	
			13968-55-3/1	Uranium-233/234	1.09 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	137 mg/kg	
			16984-48-8	Fluoride	1.79 mg/kg	
527134004	SED-22P2-24-36	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.08 pCi/g	
			13968-55-3/1	Uranium-233/234	1.81 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	75.9 mg/kg	
			16984-48-8	Fluoride	3.02 mg/kg	
527134005	SED-38P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	2.13 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	17.0 pCi/g	
			13968-55-3/1	Uranium-233/234	60.9 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	15117-96-1/1	Uranium-235/236	3.12 pCi/g	
			3982-70-2			
7664-41-7	Nitrogen, Ammonia		581 mg/kg			
527134006	SED-38P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.52 pCi/g	
			13968-55-3/1	Uranium-233/234	4.19 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	15117-96-1/1	Uranium-235/236	0.276 pCi/g	
			3982-70-2			
			7664-41-7	Nitrogen, Ammonia	491 mg/kg	
527134007	SED-38P2-12-24	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.71 pCi/g	
			13968-55-3/1	Uranium-233/234	3.01 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	15117-96-1/1	Uranium-235/236	0.188 pCi/g	
			3982-70-2			
			7664-41-7	Nitrogen, Ammonia	596 mg/kg	
527134008	SED-38P2-24-36	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.6 pCi/g	
			13968-55-3/1	Uranium-233/234	1.74 pCi/g	
			3966-29-5			

## Analytical Detections Summary

<b>SDG/Report#</b>	527134	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
527134008	SED-38P2-24-36	EPA 350.1 Modified SC SW846 9056A	7664-41-7 16984-48-8	Nitrogen, Ammonia Fluoride	306 mg/kg 3.55 mg/kg	
527134009	SED-38P2-24-36-DU P	DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC SW846 9056A	7440-61-1 13968-55-3/1 3966-29-5 7664-41-7 16984-48-8	Uranium-238 Uranium-233/234  Nitrogen, Ammonia Fluoride	1.25 pCi/g 1.66 pCi/g  393 mg/kg 3.9 mg/kg	
527134010	SED-21P2-0-6	DOE EML HASL-300, Tc-02-RC Modified DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC SW846 9056A	14133-76-7 7440-61-1 13968-55-3/1 3966-29-5 15117-96-1/1 3982-70-2 7664-41-7 16984-48-8	Technetium-99 Uranium-238 Uranium-233/234 Uranium-235/236  Nitrogen, Ammonia Fluoride	1.17 pCi/g 3.79 pCi/g 13.2 pCi/g 0.393 pCi/g  476 mg/kg 13.2 mg/kg	
527134011	SED-21P2-6-12	DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC SW846 9056A	7440-61-1 13968-55-3/1 3966-29-5 7664-41-7 16984-48-8	Uranium-238 Uranium-233/234  Nitrogen, Ammonia Fluoride	1.51 pCi/g 2.19 pCi/g  474 mg/kg 8.86 mg/kg	
527134012	SED-21P2-12-24	DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC SW846 9056A	7440-61-1 13968-55-3/1 3966-29-5 7664-41-7 16984-48-8	Uranium-238 Uranium-233/234  Nitrogen, Ammonia Fluoride	1.07 pCi/g 1.56 pCi/g  282 mg/kg 4.73 mg/kg	
527134013	SED-21P2-24-36	DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC SW846 9056A	7440-61-1 13968-55-3/1 3966-29-5 7664-41-7 16984-48-8	Uranium-238 Uranium-233/234  Nitrogen, Ammonia Fluoride	0.97 pCi/g 1.75 pCi/g  180 mg/kg 4.45 mg/kg	
527134014	SED-41P2-0-6	DOE EML HASL-300, Tc-02-RC Modified DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC SW846 9056A	14133-76-7 7440-61-1 13968-55-3/1 3966-29-5 15117-96-1/1 3982-70-2 7664-41-7 16984-48-8	Technetium-99 Uranium-238 Uranium-233/234 Uranium-235/236  Nitrogen, Ammonia Fluoride	1.12 pCi/g 3.38 pCi/g 17.0 pCi/g 0.789 pCi/g  897 mg/kg 14.6 mg/kg	
527134015	SED-41P2-6-12	DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC SW846 9056A	7440-61-1 13968-55-3/1 3966-29-5 7664-41-7 16984-48-8	Uranium-238 Uranium-233/234  Nitrogen, Ammonia Fluoride	1.29 pCi/g 1.84 pCi/g  367 mg/kg 5.18 mg/kg	
527134016	SED-41P2-12-24	DOE EML HASL-300, U-02-RC Modified  EPA 350.1 Modified SC	7440-61-1 13968-55-3/1 3966-29-5 7664-41-7	Uranium-238 Uranium-233/234  Nitrogen, Ammonia	1.87 pCi/g 2.14 pCi/g  555 mg/kg	

## Analytical Detections Summary

<b>SDG/Report#</b>	527134	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
527134017	SED-41P2-24-36	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.925 pCi/g	
			13968-55-3/1	Uranium-233/234	0.806 pCi/g	
		EPA 350.1 Modified SC	3966-29-5			
		SW846 9056A	7664-41-7	Nitrogen, Ammonia	896 mg/kg	
			16984-48-8	Fluoride	5.77 mg/kg	

**NOTE:** This report only lists detections greater than the reporting level. Reporting level is the LOQ, PQL, MDC, or Client-provided limit.

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-22P2-0-6	Project:	WNUC01320
Sample ID:	527134001	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-NOV-20 15:10		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	61.1%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		9.90	0.914	2.69	mg/kg	10.5	1	LXA2	11/13/20	0157	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		531	8.69	24.1	mg/kg	18.8	10	KLP1	11/18/20	1558	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-22P2-6-12	Project:	WNUC01320
Sample ID:	527134002	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-NOV-20 15:21		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	53%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		6.95	0.716	2.11	mg/kg	9.90	1	LXA2	11/13/20	0318	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		386	14.1	39.1	mg/kg	36.8	10	KLP1	11/18/20	1559	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-22P2-12-24	Project:	WNUC01320
Sample ID:	527134003	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-NOV-20 15:30		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	36.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.79	0.540	1.59	mg/kg	10.1	1	LXA2	11/13/20	0345	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		137	7.71	21.4	mg/kg	27.2	10	KLP1	11/18/20	1600	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-22P2-24-36	Project:	WNUC01320
Sample ID:	527134004	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-NOV-20 15:35		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	25.8%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.02	0.467	1.37	mg/kg	10.2	1	LXA2	11/13/20	0412	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		75.9	0.759	2.11	mg/kg	31.3	1	KLP1	11/18/20	1449	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-38P2-0-6	Project:	WNUC01320
Sample ID:	527134005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 12:45		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	74.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.56	1.22	3.57	mg/kg	9.11	1	LXA2	11/13/20	0439	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		581	33.9	94.3	mg/kg	48.1	10	KLP1	11/18/20	1601	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

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Project: Sediment and GW Campaign

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Client Sample ID:	SED-38P2-6-12	Project:	WNUC01320
Sample ID:	527134006	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 12:55		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	67.2%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.91	1.12	3.29	mg/kg	10.8	1	LXA2	11/13/20	0506	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		491	21.1	58.6	mg/kg	38.5	10	KLP1	11/18/20	1602	2062507	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

---

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Sediment and GW Campaign

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Client Sample ID:	SED-38P2-12-24	Project:	WNUC01320
Sample ID:	527134007	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 13:05		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	76%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	4.27	1.48	4.36	mg/kg	10.5	1	LXA2	11/13/20	0627	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		596	22.3	62.0	mg/kg	29.8	10	KLP1	11/18/20	1607	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-38P2-24-36	Project:	WNUC01320
Sample ID:	527134008	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 13:15		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	44.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.55	0.624	1.84	mg/kg	10.2	1	LXA2	11/13/20	0654	2062395	1
<b>Nutrient Analysis</b>												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		306	8.88	24.7	mg/kg	27.5	10	KLP1	11/18/20	1607	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: December 8, 2020

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-38P2-24-36-DUP      Project: WNUC01320  
Sample ID: 527134009      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 10-NOV-20 13:15  
Receive Date: 11-NOV-20  
Collector: Client  
Moisture: 45.1%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.90	0.614	1.81	mg/kg	9.93	1	LXA2	11/13/20	0721	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		393	7.66	21.3	mg/kg	23.4	10	KLP1	11/18/20	1608	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit



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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-21P2-0-6	Project:	WNUC01320
Sample ID:	527134010	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 16:20		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	77.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		13.2	1.39	4.10	mg/kg	9.24	1	LXA2	11/13/20	0748	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		476	15.1	42.1	mg/kg	18.9	10	KLP1	11/18/20	1609	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-21P2-6-12      Project: WNUC01320  
Sample ID: 527134011      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 10-NOV-20 16:30  
Receive Date: 11-NOV-20  
Collector: Client  
Moisture: 72.7%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		8.86	1.20	3.53	mg/kg	9.62	1	LXA2	11/13/20	0815	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		474	23.2	64.6	mg/kg	35.2	10	KLP1	11/18/20	1610	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-21P2-12-24      Project: WNUC01320  
Sample ID: 527134012      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 10-NOV-20 16:40  
Receive Date: 11-NOV-20  
Collector: Client  
Moisture: 45.8%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.73	0.631	1.86	mg/kg	10.1	1	LXA2	11/13/20	0842	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		282	10.8	30.0	mg/kg	32.5	10	KLP1	11/18/20	1611	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-21P2-24-36	Project:	WNUC01320
Sample ID:	527134013	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 16:50		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	52.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.45	0.741	2.18	mg/kg	10.3	1	LXA2	11/13/20	0909	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		180	2.21	6.13	mg/kg	58.1	1	KLP1	11/18/20	1501	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-41P2-0-6	Project:	WNUC01320
Sample ID:	527134014	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 17:30		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	85.8%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		14.6	2.31	6.79	mg/kg	9.66	1	LXA2	11/13/20	0936	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		897	31.6	87.8	mg/kg	25.0	10	KLP1	11/18/20	1612	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-41P2-6-12	Project:	WNUC01320
Sample ID:	527134015	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 17:40		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	76.6%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.18	1.41	4.14	mg/kg	9.71	1	LXA2	11/13/20	1003	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		367	24.6	68.4	mg/kg	32.1	10	KLP1	11/18/20	1613	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-41P2-12-24      Project: WNUC01320  
Sample ID: 527134016      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 10-NOV-20 17:50  
Receive Date: 11-NOV-20  
Collector: Client  
Moisture: 67.6%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.10	1.02	2.99	mg/kg	9.69	1	LXA2	11/13/20	1030	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		555	15.8	43.9	mg/kg	28.4	10	KLP1	11/18/20	1613	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-41P2-24-36 Project: WNUC01320  
Sample ID: 527134017 Client ID: WNUC009  
Matrix: Solid  
Collect Date: 10-NOV-20 18:00  
Receive Date: 11-NOV-20  
Collector: Client  
Moisture: 78.7%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.77	1.54	4.54	mg/kg	9.69	1	LXA2	11/13/20	1245	2062395	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		896	23.4	65.1	mg/kg	27.8	10	KLP1	11/18/20	1620	2062507	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	11/18/20	1217	2062506
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/12/20	2203	2062379

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor  
DL: Detection Limit  
MDA: Minimum Detectable Activity  
MDC: Minimum Detectable Concentration  
Lc/LC: Critical Level  
PF: Prep Factor  
RL: Reporting Limit  
SQL: Sample Quantitation Limit



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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-22P2-0-6	Project: WNUC01320
Sample ID: 527134001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-NOV-20 15:10	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 61.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		6.21	+/-1.00	0.302	0.500	pCi/g			BXA4	12/03/20	0900	2062484	1
Uranium-235/236		0.257	+/-0.248	0.154	0.500	pCi/g							
Uranium-238		2.24	+/-0.604	0.125	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.304	+/-0.416	0.704	1.00	pCi/g			JJ3	12/06/20	1140	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			86.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-22P2-6-12	Project:	WNUC01320
Sample ID:	527134002	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-NOV-20 15:21		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	53%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.97	+/-0.573	0.284	0.500	pCi/g			BXA4	12/03/20	0900	2062484	1
Uranium-235/236	U	0.192	+/-0.226	0.245	0.500	pCi/g							
Uranium-238		0.971	+/-0.406	0.229	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.0333	+/-0.405	0.705	1.00	pCi/g			JJ3	12/06/20	1232	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			89.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-22P2-12-24	Project:	WNUC01320
Sample ID:	527134003	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-NOV-20 15:30		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	36.5%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.09	+/-0.415	0.287	0.500	pCi/g			BXA4	12/03/20	0900	2062484	1
Uranium-235/236	U	0.0350	+/-0.131	0.221	0.500	pCi/g							
Uranium-238		0.838	+/-0.359	0.206	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.0843	+/-0.422	0.745	1.00	pCi/g			JJ3	12/06/20	1325	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			92.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			71	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-22P2-24-36	Project: WNUC01320
Sample ID: 527134004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-NOV-20 15:35	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 25.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.81	+/-0.557	0.378	0.500	pCi/g			BXA4	12/03/20	0900	2062484	1
Uranium-235/236	U	0.225	+/-0.243	0.276	0.500	pCi/g							
Uranium-238		1.08	+/-0.428	0.283	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.377	+/-0.399	0.728	1.00	pCi/g			JJ3	12/06/20	1417	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			75.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-38P2-0-6	Project:	WNUC01320
Sample ID:	527134005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 12:45		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	74.5%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		60.9	+/-2.95	0.299	0.500	pCi/g			BXA4	12/03/20	0900	2062484	1
Uranium-235/236		3.12	+/-0.748	0.138	0.500	pCi/g							
Uranium-238		17.0	+/-1.56	0.300	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		2.13	+/-0.485	0.694	1.00	pCi/g			JJ3	12/06/20	1510	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			92.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-38P2-6-12	Project: WNUC01320
Sample ID: 527134006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-NOV-20 12:55	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 67.2%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		4.19	+/-0.862	0.353	0.500	pCi/g			BXA4	12/03/20	0900	2062484	1
Uranium-235/236		0.276	+/-0.266	0.165	0.500	pCi/g							
Uranium-238		2.52	+/-0.667	0.247	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.116	+/-0.398	0.688	1.00	pCi/g			JJ3	12/06/20	1603	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			81.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-38P2-12-24	Project:	WNUC01320
Sample ID:	527134007	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 13:05		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	76%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		3.01	+/-0.680	0.339	0.500	pCi/g			BXA4	12/03/20	1005	2062484	1
Uranium-235/236		0.188	+/-0.207	0.141	0.500	pCi/g							
Uranium-238		1.71	+/-0.505	0.114	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.174	+/-0.417	0.716	1.00	pCi/g			JJ3	12/06/20	1655	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			91.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-38P2-24-36	Project: WNUC01320
Sample ID: 527134008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-NOV-20 13:15	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 44.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.74	+/-0.523	0.295	0.500	pCi/g			BXA4	12/03/20	1005	2062484	1
Uranium-235/236	U	0.0835	+/-0.164	0.228	0.500	pCi/g							
Uranium-238		1.60	+/-0.494	0.184	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.128	+/-0.412	0.711	1.00	pCi/g			JJ3	12/06/20	1748	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-38P2-24-36-DUP	Project:	WNUC01320
Sample ID:	527134009	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 13:15		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	45.1%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.66	+/-0.529	0.324	0.500	pCi/g			BXA4	12/03/20	1005	2062484	1
Uranium-235/236	U	0.0261	+/-0.145	0.278	0.500	pCi/g							
Uranium-238		1.25	+/-0.459	0.284	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.144	+/-0.418	0.721	1.00	pCi/g			JJ3	12/06/20	1840	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			86.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76.1	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-21P2-0-6      Project: WNUC01320  
Sample ID: 527134010      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 10-NOV-20 16:20  
Receive Date: 11-NOV-20  
Collector: Client  
Moisture: 77.5%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		13.2	+/-1.29	0.256	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236		0.393	+/-0.263	0.193	0.500	pCi/g							
Uranium-238		3.79	+/-0.694	0.199	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99		1.17	+/-0.441	0.683	1.00	pCi/g			JJ3	12/06/20	1933	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			106	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			71.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-21P2-6-12	Project:	WNUC01320
Sample ID:	527134011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 16:30		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	72.7%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.19	+/-0.589	0.358	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236	U	0.131	+/-0.213	0.329	0.500	pCi/g							
Uranium-238		1.51	+/-0.491	0.318	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.528	+/-0.415	0.686	1.00	pCi/g			JJ3	12/06/20	2025	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			91.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			75.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-21P2-12-24	Project: WNUC01320
Sample ID: 527134012	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-NOV-20 16:40	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 45.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.56	+/-0.489	0.306	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236	U	0.0344	+/-0.129	0.217	0.500	pCi/g							
Uranium-238		1.07	+/-0.401	0.224	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.225	+/-0.414	0.707	1.00	pCi/g			JJ3	12/06/20	2118	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			97.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-21P2-24-36	Project: WNUC01320
Sample ID: 527134013	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-NOV-20 16:50	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 52.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.75	+/-0.568	0.509	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236	U	-0.102	+/-0.157	0.454	0.500	pCi/g							
Uranium-238		0.970	+/-0.487	0.609	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.0586	+/-0.403	0.700	1.00	pCi/g			JJ3	12/06/20	2210	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			89.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			75.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-41P2-0-6	Project: WNUC01320
Sample ID: 527134014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-NOV-20 17:30	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 85.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		17.0	+/-1.89	0.421	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236		0.789	+/-0.476	0.322	0.500	pCi/g							
Uranium-238		3.38	+/-0.852	0.331	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.12	+/-0.443	0.692	1.00	pCi/g			JJ3	12/06/20	2303	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			67.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-41P2-6-12	Project: WNUC01320
Sample ID: 527134015	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-NOV-20 17:40	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 76.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.84	+/-0.555	0.386	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236	U	0.0733	+/-0.168	0.267	0.500	pCi/g							
Uranium-238		1.29	+/-0.485	0.430	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.0380	+/-0.412	0.718	1.00	pCi/g			JJ3	12/06/20	2355	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			74.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-41P2-12-24	Project: WNUC01320
Sample ID: 527134016	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-NOV-20 17:50	
Receive Date: 11-NOV-20	
Collector: Client	
Moisture: 67.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.14	+/-0.629	0.340	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236	U	-0.0134	+/-0.116	0.268	0.500	pCi/g							
Uranium-238		1.87	+/-0.592	0.351	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.216	+/-0.430	0.736	1.00	pCi/g			JJ3	12/07/20	0048	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			82.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76.1	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 8, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-41P2-24-36	Project:	WNUC01320
Sample ID:	527134017	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-NOV-20 18:00		
Receive Date:	11-NOV-20		
Collector:	Client		
Moisture:	78.7%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		0.806	+/-0.384	0.377	0.500	pCi/g			BXA4	12/03/20	1400	2062484	1
Uranium-235/236	U	0.0600	+/-0.165	0.286	0.500	pCi/g							
Uranium-238		0.925	+/-0.407	0.377	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.185	+/-0.432	0.741	1.00	pCi/g			JJ3	12/07/20	0140	2062832	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/16/20	1628	2062194

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			97.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			73.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: December 8, 2020

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 527134

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2062395										
QC1204693242		527134016	DUP								
Fluoride	J	2.10	J	2.17	mg/kg	3.09	^	(+/-3.08)	LXA2	11/13/20	11:51
QC1204693244		527134001	DUP								
Fluoride		9.90		9.65	mg/kg	2.55	^	(+/-2.51)		11/13/20	02:24
QC1204693241		LCS									
Fluoride	24.3			23.5	mg/kg			96.5 (90%-110%)		11/13/20	01:30
QC1204693240		MB									
Fluoride			U	ND	mg/kg					11/13/20	01:03
QC1204693243		527134016	MS								
Fluoride	78.0	J	2.10	23.8	mg/kg			27.8* (75%-125%)		11/13/20	12:18
QC1204693245		527134001	MS								
Fluoride	61.7		9.90	33.0	mg/kg			37.4* (75%-125%)		11/13/20	02:51
<b>Nutrient Analysis</b>											
Batch	2062507										
QC1204693494		527134016	DUP								
Nitrogen, Ammonia		555		610	mg/kg	9.45		(0%-20%)	KLP1	11/18/20	16:14
QC1204693492		LCS									
Nitrogen, Ammonia	50.0			50.0	mg/kg			100 (90%-110%)		11/18/20	14:38
QC1204693491		MB									
Nitrogen, Ammonia			U	ND	mg/kg					11/18/20	14:37
QC1204693496		527134016	MS								
Nitrogen, Ammonia	103		555	678	mg/kg			N/A (90%-110%)		11/18/20	16:19

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## QC Summary

Workorder: 527134

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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### Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes
- h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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## QC Summary

Report Date: December 8, 2020

Page 1 of 4

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 527134

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2062395										
QC1204693242		527134016	DUP								
Fluoride	J	2.10	J	2.17	mg/kg	3.09	^	(+/-3.08)	LXA2	11/13/20	11:51
QC1204693244		527134001	DUP								
Fluoride		9.90		9.65	mg/kg	2.55	^	(+/-2.51)		11/13/20	02:24
QC1204693241		LCS									
Fluoride	24.3			23.5	mg/kg			96.5 (90%-110%)		11/13/20	01:30
QC1204693240		MB									
Fluoride			U	0.000	mg/kg					11/13/20	01:03
QC1204693243		527134016	MS								
Fluoride	78.0	J	2.10	23.8	mg/kg			27.8* (75%-125%)		11/13/20	12:18
QC1204693245		527134001	MS								
Fluoride	61.7		9.90	33.0	mg/kg			37.4* (75%-125%)		11/13/20	02:51
<b>Nutrient Analysis</b>											
Batch	2062507										
QC1204693494		527134016	DUP								
Nitrogen, Ammonia		555		610	mg/kg	9.45		(0%-20%)	KLP1	11/18/20	16:14
QC1204693492		LCS									
Nitrogen, Ammonia	50.0			50.0	mg/kg			100 (90%-110%)		11/18/20	14:38
QC1204693491		MB									
Nitrogen, Ammonia			U	-0.278	mg/kg					11/18/20	14:37
QC1204693496		527134016	MS								
Nitrogen, Ammonia	103		555	678	mg/kg			N/A (90%-110%)		11/18/20	16:19

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## QC Summary

Workorder: 527134

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	2062484										
QC1204693456	527134016	DUP									
Uranium-233/234		2.14		1.39	pCi/g	42.4*		(0%-20%)	BXA4	12/03/20	14:00
Uranium-235/236	U	-0.0134	U	0.0357	pCi/g	N/A		N/A			
Uranium-238		1.87		1.73	pCi/g	7.87		(0%-20%)			
QC1204693457	LCS										
Uranium-233/234				10.4	pCi/g					12/03/20	14:00
Uranium-235/236				0.426	pCi/g						
Uranium-238	12.6			12.9	pCi/g		102	(75%-125%)			
QC1204693455	MB										
Uranium-233/234			U	-0.0628	pCi/g					12/03/20	14:00
Uranium-235/236			U	0.108	pCi/g						
Uranium-238			U	0.0872	pCi/g						
<b>Rad Liquid Scintillation</b>											
Batch	2062832										
QC1204694281	527134016	DUP									
Technetium-99	U	0.216	U	0.0103	pCi/g	N/A		N/A	JJ3	12/07/20	03:25
QC1204694282	LCS										
Technetium-99	27.6			27.4	pCi/g		99.1	(75%-125%)		12/07/20	04:18
QC1204694280	MB										
Technetium-99			U	-0.0350	pCi/g					12/07/20	02:33

**Notes:**

The Qualifiers in this report are defined as follows:

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 527134

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
**											
<											
>											
B											
BD											
E											
FA											
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											

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## QC Summary

Workorder: 527134

Page 4 of 4

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
-----------------	------------	--------------------	-----------	--------------	-------------	-------------	--------------	--------------	-------------	-------------

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 527134**

## **General Chemistry**

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 28

**Analytical Batches:** 2062395 and 2062379

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527134001	SED-22P2-0-6
527134002	SED-22P2-6-12
527134003	SED-22P2-12-24
527134004	SED-22P2-24-36
527134005	SED-38P2-0-6
527134006	SED-38P2-6-12
527134007	SED-38P2-12-24
527134008	SED-38P2-24-36
527134009	SED-38P2-24-36-DUP
527134010	SED-21P2-0-6
527134011	SED-21P2-6-12
527134012	SED-21P2-12-24
527134013	SED-21P2-24-36
527134014	SED-41P2-0-6
527134015	SED-41P2-6-12
527134016	SED-41P2-12-24
527134017	SED-41P2-24-36
1204693240	Method Blank (MB)
1204693241	Laboratory Control Sample (LCS)
1204693242	527134016(SED-41P2-12-24) Sample Duplicate (DUP)
1204693243	527134016(SED-41P2-12-24) Matrix Spike (MS)
1204693244	527134001(SED-22P2-0-6) Sample Duplicate (DUP)
1204693245	527134001(SED-22P2-0-6) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Quality Control (QC) Information**

#### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.



Analyte	Sample	Value
Fluoride	1204693243 (SED-41P2-12-24MS)	27.8* (75%-125%)
	1204693245 (SED-22P2-0-6MS)	37.4* (75%-125%)

**Product: Ammonia Nitrogen**

**Analytical Method:** EPA 350.1 Modified SC

**Analytical Procedure:** GL-GC-E-106 REV# 10

**Analytical Batch:** 2062507

**Preparation Method:** EPA 350.1 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 2062506

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527134001	SED-22P2-0-6
527134002	SED-22P2-6-12
527134003	SED-22P2-12-24
527134004	SED-22P2-24-36
527134005	SED-38P2-0-6
527134006	SED-38P2-6-12
527134007	SED-38P2-12-24
527134008	SED-38P2-24-36
527134009	SED-38P2-24-36-DUP
527134010	SED-21P2-0-6
527134011	SED-21P2-6-12
527134012	SED-21P2-12-24
527134013	SED-21P2-24-36
527134014	SED-41P2-0-6
527134015	SED-41P2-6-12
527134016	SED-41P2-12-24
527134017	SED-41P2-24-36
1204693491	Method Blank (MB)
1204693492	Laboratory Control Sample (LCS)
1204693494	527134016(SED-41P2-12-24) Sample Duplicate (DUP)
1204693496	527134016(SED-41P2-12-24) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Sample Dilutions**

The following samples 1204693494 (SED-41P2-12-24DUP), 1204693496 (SED-41P2-12-24MS), 527134001

(SED-22P2-0-6), 527134002 (SED-22P2-6-12), 527134003 (SED-22P2-12-24), 527134005 (SED-38P2-0-6), 527134006 (SED-38P2-6-12), 527134007 (SED-38P2-12-24), 527134008 (SED-38P2-24-36), 527134009 (SED-38P2-24-36-DUP), 527134010 (SED-21P2-0-6), 527134011 (SED-21P2-6-12), 527134012 (SED-21P2-12-24), 527134014 (SED-41P2-0-6), 527134015 (SED-41P2-6-12), 527134016 (SED-41P2-12-24) and 527134017 (SED-41P2-24-36) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	527134									
	001	002	003	005	006	007	008	009	010	011
Nitrogen, Ammonia	10X	10X	10X	10X	10X	10X	10X	10X	10X	10X

Analyte	527134				
	012	014	015	016	017
Nitrogen, Ammonia	10X	10X	10X	10X	10X

## Radiochemistry

**Product:** Alphaspec U,

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 28

**Analytical Batch:** 2062484

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2062194

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
527134001	SED-22P2-0-6
527134002	SED-22P2-6-12
527134003	SED-22P2-12-24
527134004	SED-22P2-24-36
527134005	SED-38P2-0-6
527134006	SED-38P2-6-12
527134007	SED-38P2-12-24
527134008	SED-38P2-24-36
527134009	SED-38P2-24-36-DUP
527134010	SED-21P2-0-6
527134011	SED-21P2-6-12
527134012	SED-21P2-12-24
527134013	SED-21P2-24-36
527134014	SED-41P2-0-6
527134015	SED-41P2-6-12
527134016	SED-41P2-12-24
527134017	SED-41P2-24-36
1204693455	Method Blank (MB)
1204693456	527134016(SED-41P2-12-24) Sample Duplicate (DUP)
1204693457	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

Sample	Analyte	Value
1204693456 (SED-41P2-12-24DUP)	Uranium-233/234	RPD 42.4* (0.00%-20.00%) RER 1.68 (0-3)

**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2062194

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2062194

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527134001	SED-22P2-0-6
527134002	SED-22P2-6-12
527134003	SED-22P2-12-24
527134004	SED-22P2-24-36
527134005	SED-38P2-0-6
527134006	SED-38P2-6-12
527134007	SED-38P2-12-24
527134008	SED-38P2-24-36
527134009	SED-38P2-24-36-DUP
527134010	SED-21P2-0-6
527134011	SED-21P2-6-12
527134012	SED-21P2-12-24
527134013	SED-21P2-24-36
527134014	SED-41P2-0-6
527134015	SED-41P2-6-12
527134016	SED-41P2-12-24
527134017	SED-41P2-24-36

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2062832

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527134001	SED-22P2-0-6
527134002	SED-22P2-6-12
527134003	SED-22P2-12-24
527134004	SED-22P2-24-36
527134005	SED-38P2-0-6
527134006	SED-38P2-6-12
527134007	SED-38P2-12-24
527134008	SED-38P2-24-36
527134009	SED-38P2-24-36-DUP
527134010	SED-21P2-0-6
527134011	SED-21P2-6-12
527134012	SED-21P2-12-24
527134013	SED-21P2-24-36
527134014	SED-41P2-0-6
527134015	SED-41P2-6-12
527134016	SED-41P2-12-24
527134017	SED-41P2-24-36
1204694280	Method Blank (MB)
1204694281	527134016(SED-41P2-12-24) Sample Duplicate (DUP)
1204694282	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Recounts**

Samples 527134005 (SED-38P2-0-6), 527134010 (SED-21P2-0-6) and 527134014 (SED-41P2-0-6) were

recounted to verify sample results. The recount results are similar to the original results. Original results are reported.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Project # 60595649  
 GEL Quote #:  
 QC Number (1):  
 PO Number:

of 2  
 527134  
 GEL Work Order Number:

GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

GEL  
 Chemistry | Radiochemistry | Radiobiology | Speciality Analytics  
**Chain of Custody and Analytical Request**  
 GEL Project Manager:

Client Name: Westinghouse  
 Subject/Site Name: CFFF RI Phase II  
 Address: 5801 Bluff Road Hopkins, SC 29061

Client Name: Westinghouse  
 Subject/Site Name: CFFF RI Phase II  
 Address: 5801 Bluff Road Hopkins, SC 29061

Client Name: Westinghouse  
 Subject/Site Name: CFFF RI Phase II  
 Address: 5801 Bluff Road Hopkins, SC 29061

Sample ID  
 \* For composites - indicate start and stop date/time

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Radioactive (1) Yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)	Preservative Type (6)	Comments
SED-22PA-0-6	11/9/20	1510	G	N	SD	OT		1	Isotope (Alpha) TC-99		Note: extra sample is required for sample specific QC
SED-22PA-6-12	11/9/20	1521	G	N	SD	OT		1	Ammonia Fluoride		
SED-22PA-12-24	11/9/20	1530	G	N	SD	OT		1			
SED-22PA-24-36	11/9/20	1535	G	N	SD	OT		1			
SED-38PA-0-6	11/10/20	1246	G	N	SD	OT		1			
SED-38PA-6-12	11/10/20	1255	G	N	SD	OT		1			
SED-38PA-12-24	11/10/20	1305	G	N	SD	OT		1			
SED-38PA-24-36	11/10/20	1315	G	N	SD	OT		1			
SED-38PA-24-36-DUP	11/10/20	1315	G	N	SB	OT		1			

Relinquished By (Signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by (signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 1. M. ... 11/11/20 0700  
 2. ... 11/11/20 1028  
 3. ... 11/11/20 1552  
 > For sample shipping and delivery details, see Sample Receipt & Review form (SRRF)

Chain of Custody Signatures  
 TAT Requested: Normal:  X  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ (Subject to Surcharge)  
 Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks: AECOM EDD  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: 2 °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other:  
 1) Chain of Custody Number = Client Determined  
 2) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered  
 4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal  
 5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B - 7, 7470A - 1)  
 6) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank  
 7) KNOWN OR POSSIBLE HAZARDS  
 Characteristic Hazards: FL = Flammable/Ignitable, LW = Listed Waste, CO = Corrosive, RE = Reactive, TSCA Regulated, PCB = Polychlorinated biphenyls  
 RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Misc. RCRA metals, Pb = Lead  
 Other: OT = Other / Unknown (i.e. High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  
 Description:  
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e. Origin of sample(s), type of site collected from, odd matrices, etc.)

Client Name: Westinghouse  
 Project/Site Name: CFFF RI Phase II  
 Address: 5801 Bluff Road Hopkins, SC 29061  
 Phone #: \_\_\_\_\_  
 Fax #: \_\_\_\_\_

Chain of Custody and Analytical Request  
 GEL Project Manager: \_\_\_\_\_  
 Send Results To: joynerdp@westinghouse.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military (hhmm))	QC Code (1)	Field Filtered (2)	Sample Matrix (3)	Radioactive (If Yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	Sample Analysis Requested (5) (Fill in the number of containers for each test)	Preservative Type (6)	Comments	
SED-21P2-0-6	4/10/20	1620	G	N	SD	OT	(7) Known or possible hazards	1	X	X	X	Fluoride
SED-21P2-6-11		1630	G	N	SD	OT		1	X	X	X	Ammonia
SED-21P2-12-24		1640	G	N	SD	OT		1	X	X	X	
SED-21P2-24-36		1650	G	N	SD	OT		1	X	X	X	
SED-41P2-0-6		1730	G	N	SD	OT		1	X	X	X	
SED-41P2-6-12		1740	G	N	SD	OT		1	X	X	X	
SED-41P2-12-24		1750	G	N	SD	OT		1	X	X	X	
SED-41P2-12-24-MS		1750	G	N	SD	OT		1	X	X	X	
SED-41P2-12-24-MSD		1750	G	N	SD	OT		1	X	X	X	
SED-41P2-24-36		1800	G	N	SD	OT		1	X	X	X	

Chain of Custody Signatures  
 Relinquished By (Signed) \_\_\_\_\_ Date \_\_\_\_\_ Received by (signed) \_\_\_\_\_ Date \_\_\_\_\_  
 1. ML 11/11/20 0700 12/20/20 0750  
 2. Robert - Security Location 11/11/20 1028 12/20/20 1552  
 3. [Signature] 11/11/20 1552 12/20/20 1552  
 TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_  
 Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks: AECOM EDD  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: 2 °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other: \_\_\_\_\_

- Chain of Custody Number = Client Determined
- QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
- Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.
- Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal
- Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1)
- Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
- KNOWN OR POSSIBLE HAZARDS
 

RCRA Metals	AS = Arsenic	Ba = Barium	Cd = Cadmium	Cr = Chromium	Pb = Lead
Hg = Mercury	Se = Selenium	Ag = Silver	MR = Misc. RCRA metals		
Flammable/Ignitable	CO = Corrosive	RE = Reactive	TSCA Regulated	PCB = Polychlorinated biphenyls	

Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)



Laboratories LLC

### SAMPLE RECEIPT & REVIEW FORM

Client: <u>WNUC</u>	SDG/AR/COC/Work Order: <u>527134</u>
Received By: <u>[Signature]</u>	Date Received: <u>11/11/20</u>
Carrier and Tracking Number	Circle Applicable: FedEx Express   FedEx Ground   UPS   Field Services <u>Courier</u> Other

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
A) Shipped as a DOT Hazardous?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___
B) Did the client designate the samples are to be received as radioactive?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.
C) Did the RSO classify the samples as radioactive?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: Rad 1   Rad 2   Rad 3
D) Did the client designate samples are hazardous?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.
E) Did the RSO identify possible hazards?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below. PCB's   Flammable   Foreign Soil   RCRA   Asbestos   Beryllium   Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable:   Seats broken   Damaged container   Leaking container   Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable:   Client contacted and provided COC   COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs   Dry ice   None   Other: *all temperatures are recorded in Celsius   TEMP: <u>2</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Temperature Device Serial #: <u>IR3-18</u> Secondary Temperature Device Serial # (If Applicable): <u>11/11/20</u> IR3-18
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable:   Seats broken   Damaged container   Leaking container   Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
				Sample ID's and containers affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and tests affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	ID's and containers affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable:   No dates on containers   No times on containers   COC missing info   Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable:   No container count on COC   Other (describe)
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Circle Applicable:   Not relinquished   Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials SH   Date 11/13/20   Page 1 of 1



**List of current GEL Certifications as of 08 December 2020**

<b>State</b>	<b>Certification</b>
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-33
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



December 11, 2020

Ms. Cynthia Teague  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Sediment and GW Campaign  
Work Order: 527824

Dear Ms. Teague:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 18, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

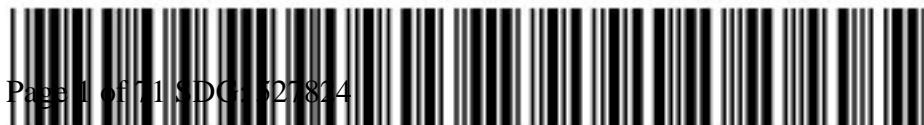
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: PO 4500778461  
Enclosures



## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC009 Westinghouse Electric Co, LLC (4500778461)

Client SDG: 527824 GEL Work Order: 527824

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Lindsay Fabra.

Reviewed by \_\_\_\_\_

*Lindsay Fabra*

## Analytical Detections Summary

<b>SDG/Report#</b>	527824	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
527824001	SED-42P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.21 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	7.57 pCi/g	
			13968-55-3/1	Uranium-233/234	31.1 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	1.18 pCi/g	
	EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	2110 mg/kg		
		16984-48-8	Fluoride	26.5 mg/kg		
527824002	SED-42P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.68 pCi/g	
			13968-55-3/1	Uranium-233/234	4.34 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	1040 mg/kg	
			16984-48-8	Fluoride	7.98 mg/kg	
527824003	SED-42P2-12-24	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.5 pCi/g	
			13968-55-3/1	Uranium-233/234	3.19 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	593 mg/kg	
			16984-48-8	Fluoride		
527824004	SED-42P2-24-36	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.58 pCi/g	
			13968-55-3/1	Uranium-233/234	1.57 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	807 mg/kg	
			16984-48-8	Fluoride		
527824005	SED-23P2-24-36	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	0.785 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.736 pCi/g	
			13968-55-3/1	Uranium-233/234	1.11 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	291 mg/kg	
	EPA 350.1 Modified SC SW846 9056A	16984-48-8	Fluoride	48.5 mg/kg		
527824006	SED-23P2-12-24	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.4 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.19 pCi/g	
			13968-55-3/1	Uranium-233/234	1.06 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	200 mg/kg	
	EPA 350.1 Modified SC SW846 9056A	16984-48-8	Fluoride	41.6 mg/kg		
527824007	SED-23P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	30.6 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.29 pCi/g	
			13968-55-3/1	Uranium-233/234	1.19 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	288 mg/kg	
	EPA 350.1 Modified SC SW846 9056A	16984-48-8	Fluoride	55.3 mg/kg		
527824008	SED-23P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	144 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.36 pCi/g	
			13968-55-3/1	Uranium-233/234	1.36 pCi/g	

## Analytical Detections Summary

<b>SDG/Report#</b>	527824	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
527824008	SED-23P2-0-6	DOE EML HASL-300, U-02-RC Modified	3966-29-5			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	680 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	89.6 mg/kg	
527824009	SED-65P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	312 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.726 pCi/g	
			13968-55-3/1	Uranium-233/234	1.01 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	156 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	40.6 mg/kg	
527824010	SED-65P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	8.41 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.791 pCi/g	
			13968-55-3/1	Uranium-233/234	1.12 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	276 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	33.6 mg/kg	
527824011	SED-24P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	118 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.13 pCi/g	
			13968-55-3/1	Uranium-233/234	3.12 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	1080 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	152 mg/kg	
527824012	SED-24P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	158 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.67 pCi/g	
			13968-55-3/1	Uranium-233/234	2.63 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	1170 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	135 mg/kg	
527824013	SED-24P2-12-18	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	33.3 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.47 pCi/g	
			13968-55-3/1	Uranium-233/234	1.57 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	0.217 pCi/g	
			3982-70-2			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	322 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	62.7 mg/kg	
527824014	SED-64P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	85.8 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.18 pCi/g	
			13968-55-3/1	Uranium-233/234	1.3 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	311 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	49.4 mg/kg	
527824015	SED-64P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	5.53 pCi/g	

## Analytical Detections Summary

<b>SDG/Report#</b>	527824	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
527824015	SED-64P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.32 pCi/g	
			13968-55-3/1	Uranium-233/234	1.11 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	283 mg/kg	
			16984-48-8	Fluoride	33.7 mg/kg	
527824016	SED-63P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	25.0 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.875 pCi/g	
			13968-55-3/1	Uranium-233/234	0.853 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	218 mg/kg	
			16984-48-8	Fluoride	37.7 mg/kg	
527824017	SED-63P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	2.63 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.649 pCi/g	
			13968-55-3/1	Uranium-233/234	0.76 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	126 mg/kg	
			16984-48-8	Fluoride	24.9 mg/kg	
527824018	SED-62P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	22.9 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.73 pCi/g	
			13968-55-3/1	Uranium-233/234	1.21 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	160 mg/kg	
			16984-48-8	Fluoride	45.7 mg/kg	
527824019	SED-62P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	2.89 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.00 pCi/g	
			13968-55-3/1	Uranium-233/234	1.57 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	218 mg/kg	
			16984-48-8	Fluoride	43.5 mg/kg	
527824020	SED-62P2-6-12-DUP	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	2.98 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.35 pCi/g	
			13968-55-3/1	Uranium-233/234	1.6 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	159 mg/kg	
			16984-48-8	Fluoride	34.4 mg/kg	
527824021	SED-62P2-12-24	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.08 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.12 pCi/g	
			13968-55-3/1	Uranium-233/234	1.84 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	240 mg/kg	
			16984-48-8	Fluoride	39.0 mg/kg	

**NOTE:** This report only lists detections greater than the reporting level. Reporting level is the LOQ, PQL, MDC, or Client-provided limit.

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-42P2-0-6      Project: WNUC01320  
Sample ID: 527824001      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 11-NOV-20 09:20  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 92%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		26.5	4.24	12.5	mg/kg	9.98	1	LXA2	11/20/20	0018	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		2110	47.7	133	mg/kg	42.4	5	KLP1	12/08/20	1349	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-42P2-6-12	Project:	WNUC01320
Sample ID:	527824002	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	11-NOV-20 09:30		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	84.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		7.98	2.11	6.21	mg/kg	9.78	1	LXA2	11/20/20	0151	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1040	30.4	84.5	mg/kg	53.2	5	KLP1	12/08/20	1352	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-42P2-12-24      Project: WNUC01320  
Sample ID: 527824003      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 11-NOV-20 09:40  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 70.5%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.21	1.10	3.25	mg/kg	9.59	1	LXA2	11/20/20	0324	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		593	13.6	37.8	mg/kg	44.6	5	KLP1	12/08/20	1353	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-42P2-24-36	Project:	WNUC01320
Sample ID:	527824004	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	11-NOV-20 09:50		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	71.3%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.03	1.21	3.57	mg/kg	10.3	1	LXA2	11/20/20	0354	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		807	16.3	45.4	mg/kg	52.1	5	KLP1	12/08/20	1353	2065398	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

---

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-23P2-24-36	Project:	WNUC01320
Sample ID:	527824005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 12:45		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	23.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		48.5	0.416	1.22	mg/kg	9.37	1	LXA2	11/20/20	0527	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		291	4.60	12.8	mg/kg	39.1	5	KLP1	12/08/20	1354	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-23P2-12-24      Project: WNUC01320  
Sample ID: 527824006      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 16-NOV-20 12:55  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 24.5%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		41.6	0.416	1.22	mg/kg	9.24	1	LXA2	11/20/20	0558	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		200	4.96	13.8	mg/kg	41.7	5	KLP1	12/08/20	1355	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-23P2-6-12	Project:	WNUC01320
Sample ID:	527824007	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 13:05		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	46.9%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		55.3	0.647	1.90	mg/kg	10.1	1	LXA2	11/20/20	0629	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		288	8.15	22.6	mg/kg	48.1	5	KLP1	12/08/20	1356	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-23P2-0-6	Project:	WNUC01320
Sample ID:	527824008	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 13:15		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	66.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		89.6	1.05	3.09	mg/kg	10.3	1	LXA2	11/20/20	0700	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		680	13.4	37.4	mg/kg	50.0	5	KLP1	12/08/20	1357	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-65P2-0-6      Project: WNUC01320  
Sample ID: 527824009      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 16-NOV-20 16:35  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 31.9%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		40.6	0.509	1.50	mg/kg	10.2	1	LXA2	11/20/20	0731	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		156	5.60	15.5	mg/kg	42.4	5	KLP1	12/08/20	1402	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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## Certificate of Analysis

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Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-65P2-6-12	Project:	WNUC01320
Sample ID:	527824010	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 16:45		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	21.3%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		33.6	0.417	1.23	mg/kg	9.66	1	LXA2	11/20/20	0802	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		276	5.29	14.7	mg/kg	46.3	5	KLP1	12/08/20	1403	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-24P2-0-6	Project:	WNUC01320
Sample ID:	527824011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 14:45		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	80.4%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		152	1.67	4.90	mg/kg	9.62	1	LXA2	11/20/20	0832	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1080	22.0	61.2	mg/kg	48.1	5	KLP1	12/08/20	1403	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-24P2-6-12	Project:	WNUC01320
Sample ID:	527824012	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 14:35		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	75.9%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		135	1.41	4.14	mg/kg	9.98	1	LXA2	11/20/20	0903	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1170	20.8	57.7	mg/kg	55.6	5	KLP1	12/08/20	1404	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-24P2-12-18      Project: WNUC01320  
Sample ID: 527824013      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 16-NOV-20 14:25  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 41%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		62.7	0.576	1.69	mg/kg	10.0	1	LXA2	11/20/20	0934	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		322	6.25	17.4	mg/kg	41.0	5	KLP1	12/08/20	1405	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-64P2-0-6	Project:	WNUC01320
Sample ID:	527824014	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 11:00		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	32.2%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		49.4	0.541	1.59	mg/kg	10.8	1	LXA2	11/20/20	1005	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		311	6.26	17.4	mg/kg	47.2	5	KLP1	12/08/20	1406	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-64P2-6-12	Project:	WNUC01320
Sample ID:	527824015	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 11:20		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	22.4%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		33.7	0.449	1.32	mg/kg	10.3	1	LXA2	11/20/20	1138	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		283	5.00	13.9	mg/kg	43.1	5	KLP1	12/08/20	1407	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Sediment and GW Campaign

Client Sample ID:	SED-63P2-0-6	Project:	WNUC01320
Sample ID:	527824016	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 11:40		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	27.5%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		37.7	0.437	1.29	mg/kg	9.32	1	LXA2	11/20/20	1209	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		218	6.33	17.6	mg/kg	51.0	5	KLP1	12/08/20	1408	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-63P2-6-12	Project:	WNUC01320
Sample ID:	527824017	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 12:00		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	22.1%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		24.9	0.462	1.36	mg/kg	10.6	1	LXA2	11/20/20	1240	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		126	4.66	12.9	mg/kg	40.3	5	KLP1	12/08/20	1409	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Sediment and GW Campaign

---

Client Sample ID:	SED-62P2-0-6	Project:	WNUC01320
Sample ID:	527824018	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 14:15		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	33.2%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		45.7	0.493	1.45	mg/kg	9.69	1	LXA2	11/20/20	1311	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		160	6.01	16.7	mg/kg	44.6	5	KLP1	12/08/20	1410	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Project: Sediment and GW Campaign

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Client Sample ID:	SED-62P2-6-12	Project:	WNUC01320
Sample ID:	527824019	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 14:25		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	22.9%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		43.5	0.431	1.27	mg/kg	9.78	1	LXA2	11/20/20	1341	2064645	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		218	4.36	12.1	mg/kg	37.3	5	KLP1	12/08/20	1415	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/19/20	2203	2064643

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Sediment and GW Campaign

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Client Sample ID:	SED-62P2-6-12-DUP	Project:	WNUC01320
Sample ID:	527824020	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 14:25		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	23.6%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		34.4	0.441	1.30	mg/kg	9.90	1	JLD1	11/19/20	1014	2064709	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		159	3.55	9.86	mg/kg	30.1	5	KLP1	12/04/20	1525	2064838	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/04/20	1233	2064837
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/18/20	1954	2064708

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-62P2-12-24      Project: WNUC01320  
Sample ID: 527824021      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 17-NOV-20 14:35  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 22.8%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		39.0	0.439	1.29	mg/kg	9.98	1	JLD1	11/19/20	1045	2064709	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		240	4.70	13.1	mg/kg	40.3	5	KLP1	12/08/20	1415	2065398	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2065396
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/18/20	1954	2064708

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-42P2-0-6	Project:	WNUC01320
Sample ID:	527824001	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	11-NOV-20 09:20		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	92%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		31.1	+/-2.14	0.328	0.500	pCi/g			MP2	12/08/20	0949	2065319	1
Uranium-235/236		1.18	+/-0.471	0.141	0.500	pCi/g							
Uranium-238		7.57	+/-1.06	0.267	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.21	+/-0.489	0.760	1.00	pCi/g			JJ3	12/09/20	1405	2068822	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			67.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			90.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-42P2-6-12      Project: WNUC01320  
Sample ID: 527824002      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 11-NOV-20 09:30  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 84.3%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		4.34	+/-0.757	0.315	0.500	pCi/g			MP2	12/08/20	0949	2065319	1
Uranium-235/236	U	0.248	+/-0.231	0.270	0.500	pCi/g							
Uranium-238		1.68	+/-0.486	0.322	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.137	+/-0.505	0.874	1.00	pCi/g			JJ3	12/08/20	2111	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			78.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			89.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-42P2-12-24      Project: WNUC01320  
Sample ID: 527824003      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 11-NOV-20 09:40  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 70.5%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		3.19	+/-0.683	0.342	0.500	pCi/g			MP2	12/08/20	0949	2065319	1
Uranium-235/236	U	0.135	+/-0.201	0.293	0.500	pCi/g							
Uranium-238		1.50	+/-0.470	0.266	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.0327	+/-0.509	0.890	1.00	pCi/g			JJ3	12/08/20	2153	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			75.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			85.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-42P2-24-36	Project: WNUC01320
Sample ID: 527824004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 11-NOV-20 09:50	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 71.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.57	+/-0.483	0.337	0.500	pCi/g			MP2	12/08/20	0949	2065319	1
Uranium-235/236	U	0.0342	+/-0.153	0.300	0.500	pCi/g							
Uranium-238		1.58	+/-0.471	0.243	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.148	+/-0.511	0.908	1.00	pCi/g			JJ3	12/08/20	2236	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			83.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			88.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-23P2-24-36	Project: WNUC01320
Sample ID: 527824005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 16-NOV-20 12:45	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 23.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.11	+/-0.376	0.232	0.500	pCi/g			MP2	12/08/20	0949	2065319	1
Uranium-235/236	U	0.0379	+/-0.106	0.114	0.500	pCi/g							
Uranium-238		0.736	+/-0.308	0.202	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		0.785	+/-0.471	0.761	1.00	pCi/g			JJ3	12/08/20	2318	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			99.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			78	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-23P2-12-24	Project: WNUC01320
Sample ID: 527824006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 16-NOV-20 12:55	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 24.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.06	+/-0.350	0.241	0.500	pCi/g			MP2	12/08/20	0949	2065319	1
Uranium-235/236	U	0.0187	+/-0.121	0.247	0.500	pCi/g							
Uranium-238		1.19	+/-0.361	0.178	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.40	+/-0.515	0.792	1.00	pCi/g			JJ3	12/09/20	0117	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			102	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			78.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-23P2-6-12	Project: WNUC01320
Sample ID: 527824007	Client ID: WNUC009
Matrix: Solid	
Collect Date: 16-NOV-20 13:05	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 46.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.19	+/-0.386	0.259	0.500	pCi/g			MP2	12/08/20	0949	2065319	1
Uranium-235/236	U	0.0658	+/-0.149	0.256	0.500	pCi/g							
Uranium-238		1.29	+/-0.395	0.219	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		30.6	+/-1.15	0.691	1.00	pCi/g			JJ3	12/09/20	0159	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			91.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			83.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-23P2-0-6	Project:	WNUC01320
Sample ID:	527824008	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 13:15		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	66.5%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.36	+/-0.482	0.334	0.500	pCi/g			MP2	12/08/20	0950	2065319	1
Uranium-235/236	U	0.0994	+/-0.170	0.149	0.500	pCi/g							
Uranium-238		1.36	+/-0.467	0.193	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		144	+/-2.86	0.781	1.00	pCi/g			JJ3	12/09/20	0242	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			91.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			87.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-65P2-0-6	Project:	WNUC01320
Sample ID:	527824009	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 16:35		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	31.9%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.01	+/-0.405	0.340	0.500	pCi/g			MP2	12/08/20	0950	2065319	1
Uranium-235/236	U	0.113	+/-0.179	0.248	0.500	pCi/g							
Uranium-238		0.726	+/-0.335	0.239	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		312	+/-6.12	1.07	1.00	pCi/g			JJ3	12/09/20	0313	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			86.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-65P2-6-12	Project: WNUC01320
Sample ID: 527824010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 16-NOV-20 16:45	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 21.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.12	+/-0.447	0.408	0.500	pCi/g			MP2	12/08/20	0950	2065319	1
Uranium-235/236	U	-0.0113	+/-0.0973	0.225	0.500	pCi/g							
Uranium-238		0.791	+/-0.360	0.267	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		8.41	+/-0.813	0.896	1.00	pCi/g			JJ3	12/09/20	0328	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			83.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-24P2-0-6	Project:	WNUC01320
Sample ID:	527824011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	16-NOV-20 14:45		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	80.4%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		3.12	+/-0.703	0.316	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.160	+/-0.219	0.298	0.500	pCi/g							
Uranium-238		2.13	+/-0.575	0.190	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		118	+/-2.35	0.756	1.00	pCi/g			JJ3	12/09/20	0411	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			83.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			85.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-24P2-6-12	Project: WNUC01320
Sample ID: 527824012	Client ID: WNUC009
Matrix: Solid	
Collect Date: 16-NOV-20 14:35	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 75.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.63	+/-0.536	0.244	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.153	+/-0.164	0.187	0.500	pCi/g							
Uranium-238		1.67	+/-0.426	0.167	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		158	+/-3.11	0.767	1.00	pCi/g			JJ3	12/09/20	0450	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			102	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-24P2-12-18      Project: WNUC01320  
Sample ID: 527824013      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 16-NOV-20 14:25  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 41%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.57	+/-0.431	0.209	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236		0.217	+/-0.189	0.109	0.500	pCi/g							
Uranium-238		1.47	+/-0.420	0.237	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99		33.3	+/-1.26	0.748	1.00	pCi/g			JJ3	12/09/20	0516	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			86.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			81.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit



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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-64P2-0-6	Project:	WNUC01320
Sample ID:	527824014	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 11:00		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	32.2%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.30	+/-0.382	0.211	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.0856	+/-0.136	0.188	0.500	pCi/g							
Uranium-238		1.18	+/-0.362	0.181	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		85.8	+/-1.97	0.769	1.00	pCi/g			JJ3	12/09/20	0559	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			103	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			81.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-64P2-6-12	Project:	WNUC01320
Sample ID:	527824015	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 11:20		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	22.4%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.11	+/-0.379	0.258	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.0301	+/-0.135	0.264	0.500	pCi/g							
Uranium-238		1.32	+/-0.406	0.225	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		5.53	+/-0.689	0.822	1.00	pCi/g			JJ3	12/09/20	0641	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			87.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-63P2-0-6	Project:	WNUC01320
Sample ID:	527824016	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 11:40		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	27.5%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		0.853	+/-0.332	0.295	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.148	+/-0.169	0.211	0.500	pCi/g							
Uranium-238		0.875	+/-0.321	0.216	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		25.0	+/-1.15	0.801	1.00	pCi/g			JJ3	12/09/20	0724	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			103	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-63P2-6-12	Project: WNUC01320
Sample ID: 527824017	Client ID: WNUC009
Matrix: Solid	
Collect Date: 17-NOV-20 12:00	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 22.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		0.760	+/-0.289	0.250	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.0985	+/-0.148	0.230	0.500	pCi/g							
Uranium-238		0.649	+/-0.255	0.158	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		2.63	+/-0.547	0.760	1.00	pCi/g			JJ3	12/09/20	0806	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			98.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			83.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-62P2-0-6	Project:	WNUC01320
Sample ID:	527824018	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	17-NOV-20 14:15		
Receive Date:	18-NOV-20		
Collector:	Client		
Moisture:	33.2%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.21	+/-0.389	0.299	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.167	+/-0.170	0.168	0.500	pCi/g							
Uranium-238		1.73	+/-0.447	0.229	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		22.9	+/-1.06	0.745	1.00	pCi/g			JJ3	12/09/20	0849	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			86	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-62P2-6-12      Project: WNUC01320  
Sample ID: 527824019      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 17-NOV-20 14:25  
Receive Date: 18-NOV-20  
Collector: Client  
Moisture: 22.9%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.57	+/-0.442	0.251	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	0.0659	+/-0.130	0.180	0.500	pCi/g							
Uranium-238		2.00	+/-0.491	0.200	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99		2.89	+/-0.580	0.802	1.00	pCi/g			JJ3	12/09/20	0932	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			89	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-62P2-6-12-DUP	Project: WNUC01320
Sample ID: 527824020	Client ID: WNUC009
Matrix: Solid	
Collect Date: 17-NOV-20 14:25	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 23.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, "Dry Weight Corrected"**

Uranium-233/234		1.60	+/-0.447	0.308	0.500	pCi/g			BXA4	11/30/20	1003	2065321	1
Uranium-235/236	U	0.0636	+/-0.125	0.173	0.500	pCi/g							
Uranium-238		1.35	+/-0.403	0.236	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99		2.98	+/-0.632	0.891	1.00	pCi/g			JJ3	12/09/20	1014	2067814	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0924	2064795

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			86.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 11, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-62P2-12-24	Project: WNUC01320
Sample ID: 527824021	Client ID: WNUC009
Matrix: Solid	
Collect Date: 17-NOV-20 14:35	
Receive Date: 18-NOV-20	
Collector: Client	
Moisture: 22.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.84	+/-0.757	0.618	0.500	pCi/g			BXA4	11/28/20	0921	2065321	1
Uranium-235/236	U	-0.0207	+/-0.179	0.414	0.500	pCi/g							
Uranium-238		1.12	+/-0.585	0.460	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.08	+/-0.523	0.831	1.00	pCi/g			JJ3	12/09/20	1057	2067814	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/19/20	0759	2064827

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			52	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			75.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

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## QC Summary

Report Date: December 11, 2020

Page 1 of 4

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 527824

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2064645										
QC1204698478	527824001	DUP									
Fluoride		26.5		26.0	mg/kg	1.83	^	(+/-11.9)	LXA2	11/20/20	00:49
QC1204698480	527824002	DUP									
Fluoride		7.98		7.65	mg/kg	4.29	^	(+/-6.29)		11/20/20	02:22
QC1204698477	LCS										
Fluoride	24.4			24.2	mg/kg			99.4 (90%-110%)		11/19/20	23:47
QC1204698476	MB										
Fluoride			U	ND	mg/kg					11/19/20	23:17
QC1204698479	527824001	MS									
Fluoride	297	26.5		221	mg/kg			65.3* (75%-125%)		11/20/20	01:20
QC1204698481	527824002	MS									
Fluoride	152	7.98		81.0	mg/kg			48.2* (75%-125%)		11/20/20	02:53
<hr/>											
Batch	2064709										
QC1204698625	527820001	DUP									
Fluoride		6.96		7.09	mg/kg	1.83		(0%-109%)	JLD1	11/19/20	02:01
QC1204698626	527824021	DUP									
Fluoride		39.0		40.3	mg/kg	3.36		(0%-109%)		11/19/20	12:17
QC1204698624	LCS										
Fluoride	25.2			25.1	mg/kg			99.5 (90%-110%)		11/19/20	00:28
QC1204698623	MB										
Fluoride			U	ND	mg/kg					11/18/20	23:57

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 527824

Page 2 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch 2064709											
QC1204698627		527820001	MS								
Fluoride	28.0	6.96		28.5	mg/kg		76.9	(75%-125%)	JLD1	11/19/20	02:31
QC1204698628		527824021	MS								
Fluoride	32.5	39.0		54.9	mg/kg		48.9*	(75%-125%)		11/19/20	12:48
<b>Nutrient Analysis</b>											
Batch 2064838											
QC1204698943		527738002	DUP								
Nitrogen, Ammonia	J	1.77	J	1.61	mg/kg	9.25 ^		(+/-2.10)	KLP1	12/04/20	14:49
QC1204698942		LCS									
Nitrogen, Ammonia	50.0			51.0	mg/kg		102	(90%-110%)		12/04/20	14:47
QC1204698941		MB									
Nitrogen, Ammonia			J	1.21	mg/kg					12/04/20	14:46
QC1204698944		527738002	MS								
Nitrogen, Ammonia	42.6 J	1.77		48.6	mg/kg		110	(90%-110%)		12/04/20	14:50
Batch 2065398											
QC1204699973		527824001	DUP								
Nitrogen, Ammonia		2110		1830	mg/kg	14		(0%-20%)	KLP1	12/08/20	13:50
QC1204699974		527824021	DUP								
Nitrogen, Ammonia		240		232	mg/kg	200*				12/08/20	14:16
QC1204699972		LCS									
Nitrogen, Ammonia	50.0			54.0	mg/kg		108	(90%-110%)		12/08/20	12:47
QC1204699971		MB									
Nitrogen, Ammonia			U	ND	mg/kg					12/08/20	12:46

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 527824

Page 3 of 4

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Nutrient Analysis</b>											
Batch	2065398										
QC1204699975	527824001	MS									
Nitrogen, Ammonia	505	2110		1490	mg/kg		N/A	(90%-110%)	KLP1	12/08/20	13:51
QC1204699976	527824021	MS									
Nitrogen, Ammonia	50.6	240		271	mg/kg		N/A	(90%-110%)		12/08/20	14:17

### Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- d 5-day BOD--The 2:1 depletion requirement was not met for this sample
- e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes
- h Preparation or preservation holding time was exceeded

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 527824

Page 4 of 4

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
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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.

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: December 11, 2020

Page 1 of 6

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 527824

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2064645										
QC1204698478	527824001	DUP									
Fluoride		26.5		26.0	mg/kg	1.83	^	(+/-11.9)	LXA2	11/20/20	00:49
QC1204698480	527824002	DUP									
Fluoride		7.98		7.65	mg/kg	4.29	^	(+/-6.29)		11/20/20	02:22
QC1204698477	LCS										
Fluoride	24.4			24.2	mg/kg			99.4 (90%-110%)		11/19/20	23:47
QC1204698476	MB										
Fluoride			U	0.000	mg/kg					11/19/20	23:17
QC1204698479	527824001	MS									
Fluoride	297	26.5		221	mg/kg			65.3* (75%-125%)		11/20/20	01:20
QC1204698481	527824002	MS									
Fluoride	152	7.98		81.0	mg/kg			48.2* (75%-125%)		11/20/20	02:53
Batch	2064709										
QC1204698625	527820001	DUP									
Fluoride		6.96		7.09	mg/kg	1.83		(0%-109%)	JLD1	11/19/20	02:01
QC1204698626	527824021	DUP									
Fluoride		39.0		40.3	mg/kg	3.36		(0%-109%)		11/19/20	12:17
QC1204698624	LCS										
Fluoride	25.2			25.1	mg/kg			99.5 (90%-110%)		11/19/20	00:28
QC1204698623	MB										
Fluoride			U	0.000	mg/kg					11/18/20	23:57

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 527824

Page 2 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch 2064709											
QC1204698627		527820001	MS								
Fluoride	28.0	6.96		28.5	mg/kg		76.9	(75%-125%)	JLD1	11/19/20	02:31
QC1204698628		527824021	MS								
Fluoride	32.5	39.0		54.9	mg/kg		48.9*	(75%-125%)		11/19/20	12:48
<b>Nutrient Analysis</b>											
Batch 2064838											
QC1204698943		527738002	DUP								
Nitrogen, Ammonia	J	1.77	J	1.61	mg/kg	9.25 ^		(+/-2.10)	KLP1	12/04/20	14:49
QC1204698942		LCS									
Nitrogen, Ammonia	50.0			51.0	mg/kg		102	(90%-110%)		12/04/20	14:47
QC1204698941		MB									
Nitrogen, Ammonia			J	1.21	mg/kg					12/04/20	14:46
QC1204698944		527738002	MS								
Nitrogen, Ammonia	42.6 J	1.77		48.6	mg/kg		110	(90%-110%)		12/04/20	14:50
Batch 2065398											
QC1204699973		527824001	DUP								
Nitrogen, Ammonia		2110		1830	mg/kg	14		(0%-20%)	KLP1	12/08/20	13:50
QC1204699974		527824021	DUP								
Nitrogen, Ammonia		240		232	mg/kg	200*				12/08/20	14:16
QC1204699972		LCS									
Nitrogen, Ammonia	50.0			54.0	mg/kg		108	(90%-110%)		12/08/20	12:47
QC1204699971		MB									
Nitrogen, Ammonia			U	0.640	mg/kg					12/08/20	12:46

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## QC Summary

Workorder: 527824

Page 3 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Nutrient Analysis</b>											
Batch 2065398											
QC1204699975 527824001 MS											
Nitrogen, Ammonia	505	2110		1490	mg/kg		N/A	(90%-110%)	KLP1	12/08/20	13:51
QC1204699976 527824021 MS											
Nitrogen, Ammonia	50.6	240		271	mg/kg		N/A	(90%-110%)		12/08/20	14:17
<b>Rad Alpha Spec</b>											
Batch 2065319											
QC1204699788 527824001 DUP											
Uranium-233/234		31.1		26.8	pCi/g	14.9		(0%-20%)	MP2	12/08/20	09:50
Uranium-235/236		1.18		1.28	pCi/g	8.51		(0%-20%)			
Uranium-238		7.57		7.25	pCi/g	4.35		(0%-20%)			
QC1204699789 LCS											
Uranium-233/234				10.7	pCi/g					12/08/20	09:50
Uranium-235/236				0.798	pCi/g						
Uranium-238	11.5			11.9	pCi/g		103	(75%-125%)			
QC1204699787 MB											
Uranium-233/234			U	0.140	pCi/g					12/08/20	09:50
Uranium-235/236			U	0.0486	pCi/g						
Uranium-238			U	0.0409	pCi/g						
Batch 2065321											
QC1204699795 527824021 DUP											
Uranium-233/234		1.84		1.00	pCi/g	59.2		(0% - 100%)	BXA4	11/28/20	09:22

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## QC Summary

Workorder: 527824

Page 4 of 6

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	2065321										
Uranium-235/236	U	-0.0207	U	0.114	pCi/g	N/A		N/A BXA4		11/28/20	09:22
Uranium-238		1.12		1.18	pCi/g	5.49		(0% - 100%)			
QC1204699796	LCS										
Uranium-233/234				11.5	pCi/g					11/28/20	09:22
Uranium-235/236				0.631	pCi/g						
Uranium-238	10.3			12.4	pCi/g		120	(75%-125%)			
QC1204699794	MB										
Uranium-233/234			U	-0.0653	pCi/g					11/28/20	09:22
Uranium-235/236			U	0.0310	pCi/g						
Uranium-238			U	0.00924	pCi/g						
<b>Rad Liquid Scintillation</b>											
Batch	2067814										
QC1204705091	527824021 DUP										
Technetium-99		1.08	U	0.645	pCi/g	50.6		(0% - 100%)	JJ3	12/09/20	12:22
QC1204705092	LCS										
Technetium-99	28.3			31.9	pCi/g		113	(75%-125%)		12/09/20	13:04
QC1204705090	MB										
Technetium-99			U	-0.0672	pCi/g					12/09/20	11:39
Batch	2068822										
QC1204707249	528771021 DUP										
Technetium-99	U	0.700	U	0.594	pCi/g	N/A		N/A	JJ3	12/08/20	19:22



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## QC Summary

Workorder: 527824

Page 5 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	2068822										
QC1204707250		LCS									
Technetium-99	28.3			31.6	pCi/g		112	(75%-125%)	JJ3	12/08/20	20:10
QC1204707248		MB									
Technetium-99			U	0.278	pCi/g					12/08/20	18:35

**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
- B The target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier

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## QC Summary

Workorder: 527824

Page 6 of 6

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Y											
Z											
^											
d											
e											
h											

Y Other specific qualifiers were required to properly define the results. Consult case narrative.

Z Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.

d 5-day BOD--The 2:1 depletion requirement was not met for this sample

e 5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes

h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 527824**

## **General Chemistry**

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 28

**Analytical Batches:** 2064645 and 2064643

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824001	SED-42P2-0-6
527824002	SED-42P2-6-12
527824003	SED-42P2-12-24
527824004	SED-42P2-24-36
527824005	SED-23P2-24-36
527824006	SED-23P2-12-24
527824007	SED-23P2-6-12
527824008	SED-23P2-0-6
527824009	SED-65P2-0-6
527824010	SED-65P2-6-12
527824011	SED-24P2-0-6
527824012	SED-24P2-6-12
527824013	SED-24P2-12-18
527824014	SED-64P2-0-6
527824015	SED-64P2-6-12
527824016	SED-63P2-0-6
527824017	SED-63P2-6-12
527824018	SED-62P2-0-6
527824019	SED-62P2-6-12
1204698476	Method Blank (MB)
1204698477	Laboratory Control Sample (LCS)
1204698478	527824001(SED-42P2-0-6) Sample Duplicate (DUP)
1204698479	527824001(SED-42P2-0-6) Matrix Spike (MS)
1204698480	527824002(SED-42P2-6-12) Sample Duplicate (DUP)
1204698481	527824002(SED-42P2-6-12) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Quality Control (QC) Information**

#### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204698479 (SED-42P2-0-6MS)	65.3* (75%-125%)
	1204698481 (SED-42P2-6-12MS)	48.2* (75%-125%)

**Miscellaneous Information**

**Manual Integrations**

Sample 1204698480 (SED-42P2-6-12DUP) was manually integrated to correctly position the baseline as set in the calibration standards.

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 28

**Analytical Batches:** 2064709 and 2064708

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824020	SED-62P2-6-12-DUP
527824021	SED-62P2-12-24
1204698623	Method Blank (MB)
1204698624	Laboratory Control Sample (LCS)
1204698625	527820001(NonSDG) Sample Duplicate (DUP)
1204698626	527824021(SED-62P2-12-24) Sample Duplicate (DUP)
1204698627	527820001(NonSDG) Matrix Spike (MS)
1204698628	527824021(SED-62P2-12-24) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204698628 (SED-62P2-12-24MS)	48.9* (75%-125%)

**Product: Ammonia Nitrogen**

**Analytical Method:** EPA 350.1 Modified SC  
**Analytical Procedure:** GL-GC-E-106 REV# 10  
**Analytical Batch:** 2064838

**Preparation Method:** EPA 350.1 Modified Prep  
**Preparation Procedure:** GL-GC-E-072 REV# 18  
**Preparation Batch:** 2064837

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824020	SED-62P2-6-12-DUP
1204698941	Method Blank (MB)
1204698942	Laboratory Control Sample (LCS)
1204698943	527738002(NonSDG) Sample Duplicate (DUP)
1204698944	527738002(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Method Blank (MB) Statement**

The MB (See Below) analyzed with this SDG met the acceptance criteria. In instances where there were positive hits in the method blank, the results were evaluated and appropriately flagged on the data.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204698941 (MB)	Nitrogen, Ammonia	1.21 between (0.9 - 2.5)

**Technical Information**

**Sample Dilutions**

The following sample 527824020 (SED-62P2-6-12-DUP) was diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	<b>527824</b>
	<b>020</b>
Nitrogen, Ammonia	5X

**Sample Re-analysis**

Sample 527824020 (SED-62P2-6-12-DUP) was re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

**Product: Ammonia Nitrogen**

**Analytical Method:** EPA 350.1 Modified SC

**Analytical Procedure:** GL-GC-E-106 REV# 10

**Analytical Batch:** 2065398

**Preparation Method:** EPA 350.1 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 2065396

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824001	SED-42P2-0-6
527824002	SED-42P2-6-12
527824003	SED-42P2-12-24
527824004	SED-42P2-24-36
527824005	SED-23P2-24-36
527824006	SED-23P2-12-24
527824007	SED-23P2-6-12
527824008	SED-23P2-0-6
527824009	SED-65P2-0-6
527824010	SED-65P2-6-12
527824011	SED-24P2-0-6
527824012	SED-24P2-6-12
527824013	SED-24P2-12-18
527824014	SED-64P2-0-6
527824015	SED-64P2-6-12
527824016	SED-63P2-0-6
527824017	SED-63P2-6-12
527824018	SED-62P2-0-6
527824019	SED-62P2-6-12
527824021	SED-62P2-12-24
1204699971	Method Blank (MB)
1204699972	Laboratory Control Sample (LCS)
1204699973	527824001(SED-42P2-0-6) Sample Duplicate (DUP)
1204699974	527824021(SED-62P2-12-24) Sample Duplicate (DUP)
1204699975	527824001(SED-42P2-0-6) Matrix Spike (MS)
1204699976	527824021(SED-62P2-12-24) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

<b>Analyte</b>	<b>Sample</b>	<b>Value</b>
Nitrogen, Ammonia	1204699974 (SED-62P2-12-24DUP)	200* (0%-20%)

## Technical Information

### **Sample Dilutions**

The following samples 1204699973 (SED-42P2-0-6DUP), 1204699974 (SED-62P2-12-24DUP), 1204699975 (SED-42P2-0-6MS), 1204699976 (SED-62P2-12-24MS), 527824001 (SED-42P2-0-6), 527824002 (SED-42P2-6-12), 527824003 (SED-42P2-12-24), 527824004 (SED-42P2-24-36), 527824005 (SED-23P2-24-36), 527824006 (SED-23P2-12-24), 527824007 (SED-23P2-6-12), 527824008 (SED-23P2-0-6), 527824009 (SED-65P2-0-6), 527824010 (SED-65P2-6-12), 527824011 (SED-24P2-0-6), 527824012 (SED-24P2-6-12), 527824013 (SED-24P2-12-18), 527824014 (SED-64P2-0-6), 527824015 (SED-64P2-6-12), 527824016 (SED-63P2-0-6), 527824017 (SED-63P2-6-12), 527824018 (SED-62P2-0-6), 527824019 (SED-62P2-6-12) and 527824021 (SED-62P2-12-24) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	527824									
	001	002	003	004	005	006	007	008	009	010
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	5X

Analyte	527824									
	011	012	013	014	015	016	017	018	019	021
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	5X

## Radiochemistry

**Product:** Alphaspec U,

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 28

**Analytical Batch:** 2065319

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2064795

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824001	SED-42P2-0-6
527824002	SED-42P2-6-12
527824003	SED-42P2-12-24
527824004	SED-42P2-24-36
527824005	SED-23P2-24-36
527824006	SED-23P2-12-24
527824007	SED-23P2-6-12
527824008	SED-23P2-0-6
527824009	SED-65P2-0-6
527824010	SED-65P2-6-12
1204699787	Method Blank (MB)
1204699788	527824001(SED-42P2-0-6) Sample Duplicate (DUP)
1204699789	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Alphaspec U,

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 28

**Analytical Batch:** 2065321

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batches:** 2064795 and 2064827

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824011	SED-24P2-0-6
527824012	SED-24P2-6-12
527824013	SED-24P2-12-18
527824014	SED-64P2-0-6
527824015	SED-64P2-6-12
527824016	SED-63P2-0-6
527824017	SED-63P2-6-12
527824018	SED-62P2-0-6
527824019	SED-62P2-6-12
527824020	SED-62P2-6-12-DUP
527824021	SED-62P2-12-24
1204699794	Method Blank (MB)
1204699795	527824021(SED-62P2-12-24) Sample Duplicate (DUP)
1204699796	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Recounts**

Sample 527824020 (SED-62P2-6-12-DUP) was recounted due to a peak shift. The recount is reported.



**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2064795

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2064795

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824001	SED-42P2-0-6
527824002	SED-42P2-6-12
527824003	SED-42P2-12-24
527824004	SED-42P2-24-36
527824005	SED-23P2-24-36
527824006	SED-23P2-12-24
527824007	SED-23P2-6-12
527824008	SED-23P2-0-6
527824009	SED-65P2-0-6
527824010	SED-65P2-6-12
527824011	SED-24P2-0-6
527824012	SED-24P2-6-12
527824013	SED-24P2-12-18
527824014	SED-64P2-0-6
527824015	SED-64P2-6-12
527824016	SED-63P2-0-6
527824017	SED-63P2-6-12
527824018	SED-62P2-0-6
527824019	SED-62P2-6-12
527824020	SED-62P2-6-12-DUP
1204698849	527824001(SED-42P2-0-6) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2064827

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2064827

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824021	SED-62P2-12-24
1204698910	527824021(SED-62P2-12-24) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Liquid Scint Tc99, Soil

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2067814

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824002	SED-42P2-6-12
527824003	SED-42P2-12-24
527824004	SED-42P2-24-36
527824005	SED-23P2-24-36
527824006	SED-23P2-12-24
527824007	SED-23P2-6-12
527824008	SED-23P2-0-6
527824009	SED-65P2-0-6
527824010	SED-65P2-6-12
527824011	SED-24P2-0-6
527824012	SED-24P2-6-12
527824013	SED-24P2-12-18
527824014	SED-64P2-0-6
527824015	SED-64P2-6-12
527824016	SED-63P2-0-6
527824017	SED-63P2-6-12
527824018	SED-62P2-0-6
527824019	SED-62P2-6-12
527824020	SED-62P2-6-12-DUP
527824021	SED-62P2-12-24
1204705090	Method Blank (MB)
1204705091	527824021(SED-62P2-12-24) Sample Duplicate (DUP)
1204705092	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2068822

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
527824001	SED-42P2-0-6
1204707248	Method Blank (MB)
1204707249	528771021(NonSDG) Sample Duplicate (DUP)
1204707250	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Recounts**

Sample 527824001 (SED-42P2-0-6) was recounted to verify sample results. Recount is reported.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.



**GEL Laboratories LLC**  
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

**Chain of Custody and Analytical Request**  
 GEL Work Order Number: GEL Project Manager:

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (hh:mm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (d) (Fill in the number of containers for each test)						Comments				
						Yes, please supply isotopic info. (f)	(7) Known or possible hazards		<-- Preservative Type (6)										
SED-24P2-0-6	11/16/20	1445	G	N	SD			1	Isotopic U-a	TC-99	Ammonia	Fluoride							
SED-24P2-6-12	11/16/20	1435	G	N	SD			1											
SED-24P2-12-18	11/16/20	1425	G	N	SD			1											
SED-64P2-0-6	11/17/20	1100	G	N	SD			1											
SED-64P2-6-12	11/17/20	1120	G	N	SD			1											
SED-63P2-0-6	11/17/20	1140	G	N	SD			1											
SED-63P2-6-12	11/17/20	1200	G	N	SD			1											
SED-62P2-0-6	11/17/20	1415	G	N	SD			1											
SED-62P2-6-12	11/17/20	1425	G	N	SD			1											
SED-62P2-6-12-DUP	11/17/20	1425	G	N	SD			1											

**Chain of Custody Signatures**

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
M. deKozlowski	11/18/20	0707	J. R. Crew	11/18/20	0707
J. R. Crew	11/18/20	1035	J. R. Crew	11/18/20	1130
J. R. Crew	11/18/20	1530	J. R. Crew	11/18/20	1530

TAT Requested: Normal:  Rush:  Specify: \_\_\_\_\_ (Subject to Surcharge)

Fax Results:  Yes  No

Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4

Additional Remarks: AECOM EDD

For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: \_\_\_\_\_ °C

Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other:

- Chain of Custody Number = Client Determined
  - QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite
  - Field Filtered. For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered
  - Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, N=Nasal
  - Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
  - Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank
  - KNOWN OR POSSIBLE HAZARDS**

RCRA Metals	Characteristic Hazards	Listed Waste	Other
As = Arsenic Ba = Barium Cd = Cadmium Cr = Chromium Pb = Lead	FL = Flammable/ignitable CO = Corrosive RE = Reactive	LW = Listed Waste (F, K, P and U-listed wastes.) Waste code(s):	OT = Other / Unknown (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.) Description:
- Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

**GEL** Laboratories LLC  
 Chemistry | Radiochemistry | Radiobiology | Specialty Analytics  
**Chain of Custody and Analytical Request**  
 GEL Project Manager:  
 GEL Work Order Number: \_\_\_\_\_  
 Phone # \_\_\_\_\_  
 Fax # \_\_\_\_\_

Client Name: Westinghouse  
 Project/Site Name: CFFF RI Phase II  
 Address: 5801 Bluff Road Hopkins, SC 29061  
 Collecting By: Grant Moore/ Mike deKozlowski  
 Send Results To: joynerdp@westinghouse.com  
 Sample ID: SED-62P2-12-24  
 \* For composites - indicate start and stop date/time

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered: (f) Yes, please supply isotopic info. (g) Known or possible hazards	Total number of containers	Sample Analysis Requested (e) (Fill in the number of containers for each test)	Preservative Type (6)	Comments
<u>SED-62P2-12-24</u>	<u>11/17/20</u>	<u>1435</u>	<u>G</u>	<u>N</u>	<u>SD</u>		<u>1</u>	<u>Isotope-Ua</u>		Note: extra sample is required for sample specific QC
<u>SED-62P2-12-24-MS</u>	<u>11/17/20</u>	<u>1435</u>	<u>G</u>	<u>N</u>	<u>SD</u>		<u>1</u>	<u>TC-99</u>		
<u>SED-62P2-12-24-ASD</u>	<u>11/17/20</u>	<u>1435</u>	<u>G</u>	<u>N</u>	<u>SD</u>		<u>1</u>	<u>Ammonia</u>		
								<u>Fluoride</u>		

**Chain of Custody Signatures**

Relinquished By (Signed)	Date	Received by (Signed)	Date	Time
<u>[Signature]</u>	<u>11/18/20</u>	<u>[Signature]</u>	<u>11/18/20</u>	<u>0707</u>
<u>[Signature]</u>	<u>11/18/20</u>	<u>[Signature]</u>	<u>11/18/20</u>	<u>1035</u>
<u>[Signature]</u>	<u>11/18/20</u>	<u>[Signature]</u>	<u>11/18/20</u>	<u>1530</u>

Additional Remarks: AECOM EDD  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: \_\_\_\_\_ °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other:

1.) Chain of Custody Number = Client Determined  
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  
 4.) Matrix Codes: DW = Drinking Water, GW = Groundwater, SW = Surface Water, WW = Waste Water, W = Water, ML = Misc. Liquid, SO = Soil, SD = Sediment, SL = Sludge, SS = Solid Waste, O = Oil, F = Filter, P = Wipe, U = Urine, F = Fecal, N = Nasal  
 5.) Sample Analysis Requested - Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B 7470A - 1)  
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 7.) **KNOWN OR POSSIBLE HAZARDS**  
 Characteristic Hazards: FL = Flammable/ignitable, CO = Corrosive, RE = Reactive  
 Listed Waste: LW = Listed Waste (F, K, P and U-listed wastes.)  
 Waste code(s): \_\_\_\_\_  
 TSCA Regulated: PCB = Polychlorinated biphenyls  
 RCRA Metals: Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Misc. RCRA metals  
 Pb = Lead  
 Other: OT = Other / Unknown  
 (i.e.: High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  
 Description: \_\_\_\_\_  
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

**SAMPLE RECEIPT & REVIEW FORM**

Client: <u>WNUC</u>		SDG/AR/COC/Work Order: <u>527824</u>			
Received By: <u>AJA</u>		Date Received: <u>11/19/20</u>			
Carrier and Tracking Number		Circle Applicable: FedEx Express   FedEx Ground   UPS   Field Services <u>Courier</u> Other			
		Suspected Hazard Information			
		Yes	No		
*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.					
A) Shipped as a DOT Hazardous?		<input checked="" type="checkbox"/>	Hazard Class Shipped: _____ UN#: _____ If UN2910, Is the Radioactive Shipment Survey Compliant? Yes ___ No ___		
B) Did the client designate the samples to be received as radioactive?		<input checked="" type="checkbox"/>	COC notation or radioactive stickers on containers equal client designation.		
C) Did the RSO classify the samples as radioactive?		<input checked="" type="checkbox"/>	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): <u>0</u> CPM / mR/Hr Classified as: <b>Rad 1 Rad 2 Rad 3</b>		
D) Did the client designate samples are hazardous?		<input checked="" type="checkbox"/>	COC notation or hazard labels on containers equal client designation.		
E) Did the RSO identify possible hazards?		<input checked="" type="checkbox"/>	If D or E is yes, select Hazards below: PCB's   Flammable   Foreign Soil   RCRA   Asbestos   Beryllium   Other: _____		
Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
2	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Client contacted and provided COC   COC created upon receipt
3	Samples requiring cold preservation within (0 ≤ deg. C)?*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Preservation Method: <u>Wet Ice</u> Ice Packs   Dry ice   None   Other: _____ *all temperatures are recorded in Celsius <i>21° rechem</i> <i>TEMP: 1° - solids</i>
4	Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Temperature Device Serial #: <u>IR4-16</u> Secondary Temperature Device Serial # (If Applicable): _____
5	Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Seals broken   Damaged container   Leaking container   Other (describe)
6	Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Sample ID's and Containers Affected: If Preservation added, Lot#: _____
7	Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		If Yes, are Encores or Soil Kits present for solids? Yes <input checked="" type="checkbox"/> No ___ NA ___ (If yes, take to VOA Freezer)
					Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
					Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___
8	Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		ID's and containers affected: <u>SED-62P2-12-24 has ID SED-62P2-12-18</u>
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: No dates on containers   No times on containers   COC missing info   Other (describe)
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: No container count on COC   Other (describe)
12	Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
13	COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Circle Applicable: Not relinquished   Other (describe)
Comments (Use Continuation Form if needed):					

PM (or PMA) review: Initials NRG Date 11/19/20 Page 1 of 1

**List of current GEL Certifications as of 11 December 2020**

<b>State</b>	<b>Certification</b>
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-33
Vermont	VT87156
Virginia NELAP	460202
Washington	C780





December 18, 2020

Ms. Cynthia Teague  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Soil and Vegetation Analysis  
Work Order: 528771

Dear Ms. Teague:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on November 25, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

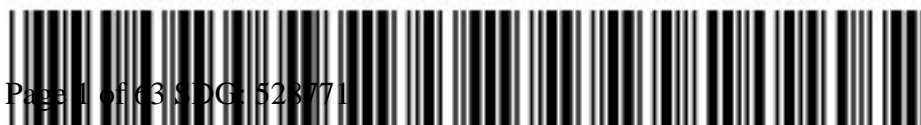
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500775170  
Enclosures



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

## Certificate of Analysis Report for

WNUC008 Westinghouse Electric Co, LLC

Client SDG: 528771 GEL Work Order: 528771

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, 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: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-61P2-0-6	Project:	WNUC00821
Sample ID:	528771001	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 11:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	16.2%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.47	0.404	1.19	mg/kg	9.95	1	LXA2	11/26/20	0207	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		14.1	1.01	2.82	mg/kg	47.2	1	KLP1	12/08/20	1318	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-61P2-0-6-DUP	Project:	WNUC00821
Sample ID:	528771002	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 11:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	20.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.04	0.418	1.23	mg/kg	9.78	1	LXA2	11/26/20	0238	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		9.39	0.765	2.13	mg/kg	33.8	1	KLP1	12/08/20	1420	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-61P2-6-12	Project:	WNUC00821
Sample ID:	528771003	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 12:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	11%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.29	0.382	1.12	mg/kg	10.0	1	LXA2	11/26/20	0410	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		17.0	0.816	2.27	mg/kg	40.3	1	KLP1	12/08/20	1421	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-61P2-12-18	Project:	WNUC00821
Sample ID:	528771004	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 12:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	13.6%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		15.2	0.394	1.16	mg/kg	10.0	1	LXA2	11/26/20	0543	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		30.2	0.947	2.63	mg/kg	45.5	1	KLP1	12/08/20	1427	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-16P2-0-6	Project:	WNUC00821
Sample ID:	528771005	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 14:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	25.8%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		15.5	0.454	1.33	mg/kg	9.90	1	LXA2	11/26/20	0614	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		91.8	0.978	2.72	mg/kg	40.3	1	KLP1	12/08/20	1428	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-16P2-6-12	Project:	WNUC00821
Sample ID:	528771006	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 14:10		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	23.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		10.3	0.446	1.31	mg/kg	10.1	1	LXA2	11/26/20	0645	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		39.4	1.11	3.08	mg/kg	47.2	1	KLP1	12/08/20	1429	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-16P2-12-24	Project:	WNUC00821
Sample ID:	528771007	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 14:20		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	18.4%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.78	0.415	1.22	mg/kg	9.95	1	LXA2	11/26/20	0716	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		8.90	1.04	2.89	mg/kg	47.2	1	KLP1	12/08/20	1430	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-60P2-0-6	Project:	WNUC00821
Sample ID:	528771008	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 15:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	18.4%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		19.2	0.420	1.23	mg/kg	10.1	1	LXA2	11/26/20	0746	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		45.7	0.935	2.60	mg/kg	42.4	1	KLP1	12/08/20	1431	2067364	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

---

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-60P2-6-12	Project:	WNUC00821
Sample ID:	528771009	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 15:15		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	18.4%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		14.1	0.417	1.23	mg/kg	10.0	1	LXA2	11/26/20	0817	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		57.3	0.875	2.43	mg/kg	39.7	1	KLP1	12/08/20	1432	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Soil and Vegetation Analysis

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Client Sample ID:	SED-40P2-0-6	Project:	WNUC00821
Sample ID:	528771010	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 10:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	72.3%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.95	1.21	3.56	mg/kg	9.88	1	LXA2	11/26/20	0848	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1110	14.2	39.5	mg/kg	43.9	5	KLP1	12/08/20	1501	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Client Sample ID:	SED-40P2-6-12	Project:	WNUC00821
Sample ID:	528771011	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 10:40		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	34.8%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	0.668	0.513	1.51	mg/kg	9.83	1	LXA2	11/26/20	1021	2067319	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		122	1.17	3.25	mg/kg	42.4	1	KLP1	12/08/20	1433	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	11/25/20	1752	2067318

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-40P2-12-24	Project:	WNUC00821
Sample ID:	528771012	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 10:50		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.09	0.481	1.41	mg/kg	9.62	1	CH5	12/02/20	0302	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		140	5.33	14.8	mg/kg	40.3	5	KLP1	12/08/20	1501	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

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Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-40P2-24-36	Project:	WNUC00821
Sample ID:	528771013	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 11:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	24.7%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.42	0.437	1.29	mg/kg	9.69	1	CH5	12/02/20	0431	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		37.2	1.01	2.81	mg/kg	42.4	1	KLP1	12/08/20	1435	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-39P2-0-6	Project:	WNUC00821
Sample ID:	528771014	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 11:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	43.7%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.60	0.602	1.77	mg/kg	9.98	1	CH5	12/02/20	0501	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		329	6.15	17.1	mg/kg	38.5	5	KLP1	12/08/20	1502	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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---

Client Sample ID:	SED-39P2-6-12	Project:	WNUC00821
Sample ID:	528771015	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 11:40		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	43.3%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.41	1.16	3.42	mg/kg	9.69	2	CH5	12/02/20	1708	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		274	5.36	14.9	mg/kg	33.8	5	KLP1	12/08/20	1503	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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---

Client Sample ID:	SED-39P2-12-24	Project:	WNUC00821
Sample ID:	528771016	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 11:50		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	33.1%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	0.485	1.43	mg/kg	9.55	1	CH5	12/02/20	0601	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		72.7	1.25	3.46	mg/kg	46.3	1	KLP1	12/08/20	1442	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Soil and Vegetation Analysis

---

Client Sample ID:	SED-39P2-24-36	Project:	WNUC00821
Sample ID:	528771017	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 12:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32.2%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.75	0.511	1.50	mg/kg	10.2	1	CH5	12/02/20	0631	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		56.9	1.00	2.79	mg/kg	37.9	1	KLP1	12/08/20	1443	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

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Client Sample ID:	SED-20P2-0-6	Project:	WNUC00821
Sample ID:	528771018	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 16:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	39.1%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		6.63	0.550	1.62	mg/kg	9.85	1	CH5	12/02/20	0800	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		113	1.17	3.26	mg/kg	39.7	1	KLP1	12/08/20	1444	2067364	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

---

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

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Client Sample ID:	SED-20P2-6-12	Project:	WNUC00821
Sample ID:	528771019	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 16:15		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	36.2%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.93	1.04	3.06	mg/kg	9.78	2	CH5	12/02/20	1738	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		79.9	1.38	3.84	mg/kg	49.0	1	KLP1	12/08/20	1444	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

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Client Sample ID:	SED-20P2-12-24	Project:	WNUC00821
Sample ID:	528771020	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 16:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32.4%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.01	0.484	1.42	mg/kg	9.62	1	CH5	12/02/20	0900	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		70.8	1.13	3.13	mg/kg	42.4	1	KLP1	12/08/20	1445	2067364	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/08/20	1208	2067363
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

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Client Sample ID:	SED-20P2-24-32	Project:	WNUC00821
Sample ID:	528771021	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 17:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32.5%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		8.50	0.499	1.47	mg/kg	9.90	1	CH5	12/02/20	0930	2067326	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		54.7	1.11	3.09	mg/kg	41.7	1	KLP1	12/04/20	1535	2064838	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	12/04/20	1233	2064837
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/01/20	1900	2067325

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Soil and Vegetation Analysis

Client Sample ID:	SED-61P2-0-6	Project:	WNUC00821
Sample ID:	528771001	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 11:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	16.2%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		4.29	+/-0.836	0.285	0.500	pCi/g			BXA4	12/15/20	0930	2067891	1
Uranium-235/236	U	0.244	+/-0.248	0.245	0.500	pCi/g							
Uranium-238		0.818	+/-0.373	0.198	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.20	+/-0.470	0.738	1.00	pCi/g			JJ3	12/13/20	1401	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.8	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID: SED-61P2-0-6-DUP	Project: WNUC00821
Sample ID: 528771002	Client ID: WNUC008
Matrix: Solid	
Collect Date: 18-NOV-20 11:30	
Receive Date: 25-NOV-20	
Collector: Client	
Moisture: 20.5%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		15.1	+/-1.63	0.401	0.500	pCi/g			BXA4	12/15/20	0930	2067891	1
Uranium-235/236		0.789	+/-0.429	0.169	0.500	pCi/g							
Uranium-238		3.50	+/-0.790	0.219	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99		1.12	+/-0.417	0.651	1.00	pCi/g			JJ3	12/13/20	1453	2067816	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			78	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			88.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID: SED-61P2-6-12      Project: WNUC00821  
Sample ID: 528771003      Client ID: WNUC008  
Matrix: Solid  
Collect Date: 18-NOV-20 12:00  
Receive Date: 25-NOV-20  
Collector: Client  
Moisture: 11%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		9.17	+/-1.24	0.310	0.500	pCi/g			BXA4	12/15/20	0930	2067891	1
Uranium-235/236		0.267	+/-0.257	0.160	0.500	pCi/g							
Uranium-238		2.79	+/-0.688	0.207	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99		7.96	+/-0.628	0.662	1.00	pCi/g			JJ3	12/13/20	1546	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			81.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			86.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID: SED-61P2-12-18      Project: WNUC00821  
Sample ID: 528771004      Client ID: WNUC008  
Matrix: Solid  
Collect Date: 18-NOV-20 12:30  
Receive Date: 25-NOV-20  
Collector: Client  
Moisture: 13.6%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, Soil/Veg "Dry Weight Corrected"													
Uranium-233/234		3.86	+/-0.756	0.260	0.500	pCi/g			BXA4	12/15/20	0930	2067891	1
Uranium-235/236		0.186	+/-0.205	0.139	0.500	pCi/g							
Uranium-238		1.95	+/-0.537	0.180	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99		8.28	+/-0.738	0.673	1.00	pCi/g			JJ3	12/15/20	2306	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			86.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			91	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Project: Soil and Vegetation Analysis

Client Sample ID:	SED-16P2-0-6	Project:	WNUC00821
Sample ID:	528771005	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 14:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	25.8%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		67.2	+/-3.25	0.312	0.500	pCi/g			BXA4	12/15/20	0930	2067891	1
Uranium-235/236		3.31	+/-0.809	0.242	0.500	pCi/g							
Uranium-238		12.1	+/-1.38	0.195	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.614	+/-0.476	0.786	1.00	pCi/g			JJ3	12/13/20	1731	2067816	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			88.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			81.4	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-16P2-6-12	Project:	WNUC00821
Sample ID:	528771006	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 14:10		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	23.3%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		63.7	+/-1.78	0.132	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		3.18	+/-0.444	0.0939	0.500	pCi/g							
Uranium-238		11.8	+/-0.768	0.103	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		2.62	+/-0.562	0.743	1.00	pCi/g			JJ3	12/15/20	2339	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			100	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Soil and Vegetation Analysis

Client Sample ID:	SED-16P2-12-24	Project:	WNUC00821
Sample ID:	528771007	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 14:20		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	18.4%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		6.03	+/-0.846	0.230	0.500	pCi/g			BXA4	12/17/20	0852	2067891	1
Uranium-235/236		0.480	+/-0.277	0.180	0.500	pCi/g							
Uranium-238		1.99	+/-0.489	0.186	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		3.71	+/-0.618	0.756	1.00	pCi/g			JJ3	12/16/20	0011	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			89	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			84.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID: SED-60P2-0-6	Project: WNUC00821
Sample ID: 528771008	Client ID: WNUC008
Matrix: Solid	
Collect Date: 18-NOV-20 15:00	
Receive Date: 25-NOV-20	
Collector: Client	
Moisture: 18.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		39.7	+/-1.66	0.185	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		2.19	+/-0.437	0.0671	0.500	pCi/g							
Uranium-238		7.42	+/-0.723	0.170	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.433	+/-0.467	0.783	1.00	pCi/g			JJ3	12/13/20	2008	2067816	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			87.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-60P2-6-12	Project:	WNUC00821
Sample ID:	528771009	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	18-NOV-20 15:15		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	18.4%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil/Veg "Dry Weight Corrected"**

Uranium-233/234		44.4	+/-1.54	0.162	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		1.81	+/-0.351	0.122	0.500	pCi/g							
Uranium-238		8.17	+/-0.663	0.0819	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.483	+/-0.469	0.784	1.00	pCi/g			JJ3	12/13/20	2101	2067816	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			101	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
 Project: Soil and Vegetation Analysis

Client Sample ID:	SED-40P2-0-6	Project:	WNUC00821
Sample ID:	528771010	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 10:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	72.3%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		4.69	+/-0.534	0.178	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		0.362	+/-0.168	0.0572	0.500	pCi/g							
Uranium-238		2.29	+/-0.371	0.0906	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.400	+/-0.529	0.892	1.00	pCi/g			JJ3	12/16/20	0044	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			84.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			73.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-40P2-6-12	Project:	WNUC00821
Sample ID:	528771011	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 10:40		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	34.8%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.34	+/-0.315	0.164	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236	U	0.0449	+/-0.0965	0.159	0.500	pCi/g							
Uranium-238		1.43	+/-0.324	0.145	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.199	+/-0.462	0.792	1.00	pCi/g			JJ3	12/13/20	2246	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			84.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			71.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-40P2-12-24	Project:	WNUC00821
Sample ID:	528771012	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 10:50		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.17	+/-0.295	0.204	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236	U	-0.000427	+/-0.0865	0.187	0.500	pCi/g							
Uranium-238		1.09	+/-0.278	0.151	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.0850	+/-0.479	0.829	1.00	pCi/g			JJ3	12/13/20	2338	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			92	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			71.4	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
 Project: Soil and Vegetation Analysis

Client Sample ID: SED-40P2-24-36	Project: WNUC00821
Sample ID: 528771013	Client ID: WNUC008
Matrix: Solid	
Collect Date: 19-NOV-20 11:00	
Receive Date: 25-NOV-20	
Collector: Client	
Moisture: 24.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.36	+/-0.293	0.179	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236	U	0.0645	+/-0.0850	0.108	0.500	pCi/g							
Uranium-238		1.23	+/-0.272	0.119	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.137	+/-0.410	0.705	1.00	pCi/g			JJ3	12/14/20	0031	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			88.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			82.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID: SED-39P2-0-6	Project: WNUC00821
Sample ID: 528771014	Client ID: WNUC008
Matrix: Solid	
Collect Date: 19-NOV-20 11:30	
Receive Date: 25-NOV-20	
Collector: Client	
Moisture: 43.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.22	+/-0.373	0.178	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		0.0959	+/-0.0940	0.0575	0.500	pCi/g							
Uranium-238		1.81	+/-0.331	0.0910	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.626	+/-0.510	0.845	1.00	pCi/g			JJ3	12/14/20	0123	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			71.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID: SED-39P2-6-12	Project: WNUC00821
Sample ID: 528771015	Client ID: WNUC008
Matrix: Solid	
Collect Date: 19-NOV-20 11:40	
Receive Date: 25-NOV-20	
Collector: Client	
Moisture: 43.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.37	+/-0.425	0.202	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236	U	0.0929	+/-0.119	0.164	0.500	pCi/g							
Uranium-238		1.85	+/-0.374	0.165	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.732	+/-0.569	0.940	1.00	pCi/g			JJ3	12/14/20	0331	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			75.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			69.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID: SED-39P2-12-24	Project: WNUC00821
Sample ID: 528771016	Client ID: WNUC008
Matrix: Solid	
Collect Date: 19-NOV-20 11:50	
Receive Date: 25-NOV-20	
Collector: Client	
Moisture: 33.1%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.58	+/-0.350	0.241	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		0.243	+/-0.152	0.0663	0.500	pCi/g							
Uranium-238		1.63	+/-0.344	0.168	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.536	+/-0.522	0.872	1.00	pCi/g			JJ3	12/14/20	0424	2067816	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			76.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			68.5	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-39P2-24-36	Project:	WNUC00821
Sample ID:	528771017	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 12:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32.2%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.86	+/-0.383	0.174	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		0.181	+/-0.146	0.142	0.500	pCi/g							
Uranium-238		1.96	+/-0.391	0.156	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.281	+/-0.493	0.840	1.00	pCi/g			JJ3	12/14/20	0517	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			74.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			68.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-20P2-0-6	Project:	WNUC00821
Sample ID:	528771018	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 16:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	39.1%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.72	+/-0.350	0.169	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236	U	0.0212	+/-0.0973	0.189	0.500	pCi/g							
Uranium-238		1.67	+/-0.349	0.203	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.638	+/-0.526	0.873	1.00	pCi/g			JJ3	12/14/20	0609	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			69.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			68.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-20P2-6-12	Project:	WNUC00821
Sample ID:	528771019	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 16:15		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	36.2%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		2.13	+/-0.345	0.160	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236	U	0.0940	+/-0.0919	0.100	0.500	pCi/g							
Uranium-238		1.50	+/-0.288	0.121	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.265	+/-0.503	0.858	1.00	pCi/g			JJ3	12/14/20	0702	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			87.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			68.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-20P2-12-24	Project:	WNUC00821
Sample ID:	528771020	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 16:30		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32.4%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.43	+/-0.292	0.146	0.500	pCi/g			BXA4	12/15/20	1356	2067891	1
Uranium-235/236		0.145	+/-0.108	0.0544	0.500	pCi/g							
Uranium-238		1.89	+/-0.328	0.0440	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.208	+/-0.487	0.835	1.00	pCi/g			JJ3	12/14/20	0754	2067816	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1718	2067341

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			85.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			69.4	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: December 18, 2020

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Soil and Vegetation Analysis

Client Sample ID:	SED-20P2-24-32	Project:	WNUC00821
Sample ID:	528771021	Client ID:	WNUC008
Matrix:	Solid		
Collect Date:	19-NOV-20 17:00		
Receive Date:	25-NOV-20		
Collector:	Client		
Moisture:	32.5%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil/Veg "Dry Weight Corrected"</b>													
Uranium-233/234		1.49	+/-0.415	0.297	0.500	pCi/g			BXA4	12/05/20	0811	2068092	1
Uranium-235/236	U	0.0841	+/-0.153	0.250	0.500	pCi/g							
Uranium-238		1.40	+/-0.393	0.229	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.700	+/-0.451	0.734	1.00	pCi/g			JJ3	12/08/20	0642	2068822	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	11/27/20	1721	2067342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil/Veg "Dry Weight Corrected"			70.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## QC Summary

Report Date: December 18, 2020

Page 1 of 3

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 528771

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2067319										
QC1204703957	528771003	DUP									
Fluoride		5.29		5.64	mg/kg	6.33 ^		(+/-1.13)	LXA2	11/26/20	04:41
QC1204703955	LCS										
Fluoride	25.1			24.7	mg/kg		98.5	(90%-110%)		11/26/20	00:03
QC1204703954	MB										
Fluoride			U	ND	mg/kg					11/25/20	23:32
QC1204703959	528771003	MS									
Fluoride	27.9	5.29		30.3	mg/kg		89.6	(75%-125%)		11/26/20	05:12
Batch	2067326										
QC1204703975	528771012	DUP									
Fluoride		2.09		2.38	mg/kg	13.2 ^		(+/-1.42)	CH5	12/02/20	03:32
QC1204703974	LCS										
Fluoride	24.2			23.6	mg/kg		97.7	(90%-110%)		12/02/20	02:32
QC1204703973	MB										
Fluoride			U	ND	mg/kg					12/02/20	02:02
QC1204703976	528771012	PS									
Fluoride	2.50	0.148		1.04	mg/L		35.8*	(80%-120%)		12/02/20	04:02
<b>Nutrient Analysis</b>											
Batch	2064838										
QC1204698943	527738002	DUP									
Nitrogen, Ammonia	J	1.77	J	1.61	mg/kg	9.25 ^		(+/-2.10)	KLP1	12/04/20	14:49

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## QC Summary

Workorder: 528771

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Nutrient Analysis</b>											
Batch	2064838										
QC1204698942	LCS										
Nitrogen, Ammonia	50.0			51.0	mg/kg		102	(90%-110%)	KLP1	12/04/20	14:47
QC1204698941	MB										
Nitrogen, Ammonia			J	1.21	mg/kg					12/04/20	14:46
QC1204698944	527738002	MS									
Nitrogen, Ammonia	42.6	J	1.77	48.6	mg/kg		110	(90%-110%)		12/04/20	14:50
Batch	2067364										
QC1204704048	528771001	DUP									
Nitrogen, Ammonia			14.1	11.9	mg/kg	17.3 ^		(+/-2.98)	KLP1	12/08/20	13:19
QC1204704049	528771003	DUP									
Nitrogen, Ammonia			17.0	11.4	mg/kg	39.3*		(0%-20%)		12/08/20	14:21
QC1204704047	LCS										
Nitrogen, Ammonia	50.0			54.0	mg/kg		108	(90%-110%)		12/08/20	14:18
QC1204704046	MB										
Nitrogen, Ammonia			J	1.46	mg/kg					12/08/20	13:17
QC1204704050	528771001	MS									
Nitrogen, Ammonia	46.6		14.1	62.5	mg/kg		104	(90%-110%)		12/08/20	14:19
QC1204704051	528771003	MS									
Nitrogen, Ammonia	45.3		17.0	58.9	mg/kg		92.5	(90%-110%)		12/08/20	14:22

- Notes:**
- < Result is less than value reported
  - > Result is greater than value reported
  - B The target analyte was detected in the associated blank.
  - E General Chemistry--Concentration of the target analyte exceeds the instrument calibration range

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## QC Summary

Workorder: 528771

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
H											
J											
J											
N/A											
RPD or %Recovery limits do not apply.											
N1											
See case narrative											
ND											
Analyte concentration is not detected above the detection limit											
NJ											
Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier											
Q											
One or more quality control criteria have not been met. Refer to the applicable narrative or DER.											
R											
Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.											
R											
Sample results are rejected											
U											
Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.											
X											
Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier											
Z											
Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.											
^											
RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.											
d											
5-day BOD--The 2:1 depletion requirement was not met for this sample											
e											
5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes											
h											
Preparation or preservation holding time was exceeded											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: December 18, 2020

Page 1 of 3

Westinghouse Electric Company, LLC  
 PO Drawer R  
 Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 528771

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<hr/>											
Rad Alpha Spec											
Batch	2067891										
QC1204705275 528771003 DUP											
Uranium-233/234		9.17		8.49	pCi/g	7.71		(0%-20%)	BXA4	12/15/20	13:56
	Uncertainty	+/-1.24		+/-0.790							
Uranium-235/236		0.267		0.418	pCi/g	44.2		(0% - 100%)			
	Uncertainty	+/-0.257		+/-0.207							
Uranium-238		2.79		3.30	pCi/g	16.5		(0%-20%)			
	Uncertainty	+/-0.688		+/-0.491							
QC1204705276 LCS											
Uranium-233/234				10.5	pCi/g					12/15/20	13:56
	Uncertainty			+/-0.719							
Uranium-235/236				0.472	pCi/g						
	Uncertainty			+/-0.172							
Uranium-238	12.3			12.0	pCi/g		97.2	(75%-125%)			
	Uncertainty			+/-0.766							
QC1204705274 MB											
Uranium-233/234			U	-0.0244	pCi/g					12/15/20	13:56
	Uncertainty			+/-0.0614							
Uranium-235/236			U	0.0329	pCi/g						
	Uncertainty			+/-0.0582							
Uranium-238			U	0.0532	pCi/g						
	Uncertainty			+/-0.0679							
<hr/>											
Batch	2068092										
QC1204705651 528771021 DUP											
Uranium-233/234		1.49		0.759	pCi/g	65*		(0%-20%)	BXA4	12/05/20	16:12
	Uncertainty	+/-0.415		+/-0.277							
Uranium-235/236	U	0.0841	U	0.126	pCi/g	N/A		N/A			
	Uncertainty	+/-0.153		+/-0.141							
Uranium-238		1.40		0.648	pCi/g	73.6*		(0%-20%)			
	Uncertainty	+/-0.393		+/-0.242							



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## QC Summary

Workorder: 528771

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	2068092										
QC1204705653	LCS										
Uranium-233/234				9.68	pCi/g				BXA4	12/05/20	11:27
	Uncertainty			+/-0.832							
Uranium-235/236				0.639	pCi/g						
	Uncertainty			+/-0.241							
Uranium-238	9.92			8.82	pCi/g		88.9	(75%-125%)			
	Uncertainty			+/-0.793							
QC1204705650	MB										
Uranium-233/234			U	-0.181	pCi/g					12/05/20	11:27
	Uncertainty			+/-0.133							
Uranium-235/236			U	0.000	pCi/g						
	Uncertainty			+/-0.112							
Uranium-238			U	-0.110	pCi/g						
	Uncertainty			+/-0.122							
<b>Rad Liquid Scintillation</b>											
Batch	2067816										
QC1204705097	528771003	DUP									
Technetium-99				7.96	pCi/g	16		(0%-20%)	JJ3	12/14/20	09:39
	Uncertainty			+/-0.628							
QC1204705098	LCS										
Technetium-99				28.6	pCi/g		109	(75%-125%)		12/14/20	10:32
	Uncertainty			+/-1.83							
QC1204705096	MB										
Technetium-99			U	-0.128	pCi/g					12/14/20	08:47
	Uncertainty			+/-0.474							
Batch	2068822										
QC1204707249	528771021	DUP									
Technetium-99			U	0.700	pCi/g	N/A		N/A	JJ3	12/08/20	19:22
	Uncertainty			+/-0.451							
QC1204707250	LCS										
Technetium-99				28.3	pCi/g		112	(75%-125%)		12/08/20	20:10
	Uncertainty			+/-1.78							
QC1204707248	MB										
Technetium-99			U	0.278	pCi/g					12/08/20	18:35
	Uncertainty			+/-0.366							

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 528771

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 528771**

## **General Chemistry**

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 28

**Analytical Batches:** 2067319 and 2067318

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771001	SED-61P2-0-6
528771002	SED-61P2-0-6-DUP
528771003	SED-61P2-6-12
528771004	SED-61P2-12-18
528771005	SED-16P2-0-6
528771006	SED-16P2-6-12
528771007	SED-16P2-12-24
528771008	SED-60P2-0-6
528771009	SED-60P2-6-12
528771010	SED-40P2-0-6
528771011	SED-40P2-6-12
1204703954	Method Blank (MB)
1204703955	Laboratory Control Sample (LCS)
1204703957	528771003(SED-61P2-6-12) Sample Duplicate (DUP)
1204703959	528771003(SED-61P2-6-12) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 28

**Analytical Batches:** 2067326 and 2067325

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771012	SED-40P2-12-24
528771013	SED-40P2-24-36
528771014	SED-39P2-0-6
528771015	SED-39P2-6-12
528771016	SED-39P2-12-24
528771017	SED-39P2-24-36

528771018	SED-20P2-0-6
528771019	SED-20P2-6-12
528771020	SED-20P2-12-24
528771021	SED-20P2-24-32
1204703973	Method Blank (MB)
1204703974	Laboratory Control Sample (LCS)
1204703975	528771012(SED-40P2-12-24) Sample Duplicate (DUP)
1204703976	528771012(SED-40P2-12-24) Post Spike (PS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204703976 (SED-40P2-12-24PS)	35.8* (80%-120%)

**Technical Information**

**Sample Dilutions**

The following samples 528771015 (SED-39P2-6-12) and 528771019 (SED-20P2-6-12) in this sample group were diluted due to matrix interference. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	528771	
	015	019
Fluoride	2X	2X

**Product: Ammonia Nitrogen**

**Analytical Method:** EPA 350.1 Modified SC

**Analytical Procedure:** GL-GC-E-106 REV# 10

**Analytical Batch:** 2064838

**Preparation Method:** EPA 350.1 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 2064837

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
528771021	SED-20P2-24-32
1204698941	Method Blank (MB)
1204698942	Laboratory Control Sample (LCS)
1204698943	527738002(NonSDG) Sample Duplicate (DUP)
1204698944	527738002(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Method Blank (MB) Statement**

The MB (See Below) analyzed with this SDG met the acceptance criteria. In instances where there were positive hits in the method blank, the results were evaluated and appropriately flagged on the data.

Sample	Analyte	Value
1204698941 (MB)	Nitrogen, Ammonia	1.21 between (0.9 - 2.5)

**Technical Information**

**Sample Re-analysis**

Sample 528771021 (SED-20P2-24-32) was re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

**Product: Ammonia Nitrogen**

**Analytical Method:** EPA 350.1 Modified SC

**Analytical Procedure:** GL-GC-E-106 REV# 10

**Analytical Batch:** 2067364

**Preparation Method:** EPA 350.1 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 2067363

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL Sample ID#</u>	<u>Client Sample Identification</u>
528771001	SED-61P2-0-6
528771002	SED-61P2-0-6-DUP
528771003	SED-61P2-6-12
528771004	SED-61P2-12-18
528771005	SED-16P2-0-6
528771006	SED-16P2-6-12
528771007	SED-16P2-12-24

528771008	SED-60P2-0-6
528771009	SED-60P2-6-12
528771010	SED-40P2-0-6
528771011	SED-40P2-6-12
528771012	SED-40P2-12-24
528771013	SED-40P2-24-36
528771014	SED-39P2-0-6
528771015	SED-39P2-6-12
528771016	SED-39P2-12-24
528771017	SED-39P2-24-36
528771018	SED-20P2-0-6
528771019	SED-20P2-6-12
528771020	SED-20P2-12-24
1204704046	Method Blank (MB)
1204704047	Laboratory Control Sample (LCS)
1204704048	528771001(SED-61P2-0-6) Sample Duplicate (DUP)
1204704049	528771003(SED-61P2-6-12) Sample Duplicate (DUP)
1204704050	528771001(SED-61P2-0-6) Matrix Spike (MS)
1204704051	528771003(SED-61P2-6-12) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Nitrogen, Ammonia	1204704049 (SED-61P2-6-12DUP)	39.3* (0%-20%)

**Technical Information**

**Sample Dilutions**

The following samples 528771010 (SED-40P2-0-6), 528771012 (SED-40P2-12-24), 528771014 (SED-39P2-0-6) and 528771015 (SED-39P2-6-12) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	528771			
	010	012	014	015
Nitrogen, Ammonia	5X	5X	5X	5X

**Sample Re-analysis**

Samples 1204704047 (LCS), 1204704050 (SED-61P2-0-6MS) and 528771002 (SED-61P2-0-6-DUP) were

re-analyzed due to instrument failure. The results from the reanalysis are reported.

## **Radiochemistry**

**Product:** Alphaspec U, Soil/Veg

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 28

**Analytical Batch:** 2067891

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2067341

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771001	SED-61P2-0-6
528771002	SED-61P2-0-6-DUP
528771003	SED-61P2-6-12
528771004	SED-61P2-12-18
528771005	SED-16P2-0-6
528771006	SED-16P2-6-12
528771007	SED-16P2-12-24
528771008	SED-60P2-0-6
528771009	SED-60P2-6-12
528771010	SED-40P2-0-6
528771011	SED-40P2-6-12
528771012	SED-40P2-12-24
528771013	SED-40P2-24-36
528771014	SED-39P2-0-6
528771015	SED-39P2-6-12
528771016	SED-39P2-12-24
528771017	SED-39P2-24-36
528771018	SED-20P2-0-6
528771019	SED-20P2-6-12
528771020	SED-20P2-12-24
1204705274	Method Blank (MB)
1204705275	528771003(SED-61P2-6-12) Sample Duplicate (DUP)
1204705276	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Technical Information**

#### **Recounts**

Sample 528771007 (SED-16P2-12-24) was recounted due to a peak shift. The recount is reported.

**Product:** Alphaspec U, Soil/Veg

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 28

**Analytical Batch:** 2068092

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2067342

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771021	SED-20P2-24-32
1204705650	Method Blank (MB)
1204705651	528771021(SED-20P2-24-32) Sample Duplicate (DUP)
1204705653	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204705651 (SED-20P2-24-32DUP)	Uranium-233/234	RPD 65* (0.00%-20.00%) RER 2.65 (0-3)
	Uranium-238	RPD 73.6* (0.00%-20.00%) RER 2.97 (0-3)

**Miscellaneous Information**

**Additional Comments**

The tracer peak centroid for sample 1204705650 (MB) is greater than 50 keV from the expected library energy value for the tracer; however, the tracer yield requirement was met and the tracer peak is within the tracer region of interest.



**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2067341

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2067341

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771001	SED-61P2-0-6
528771002	SED-61P2-0-6-DUP
528771003	SED-61P2-6-12
528771004	SED-61P2-12-18
528771005	SED-16P2-0-6
528771006	SED-16P2-6-12
528771007	SED-16P2-12-24
528771008	SED-60P2-0-6
528771009	SED-60P2-6-12
528771010	SED-40P2-0-6
528771011	SED-40P2-6-12
528771012	SED-40P2-12-24
528771013	SED-40P2-24-36
528771014	SED-39P2-0-6
528771015	SED-39P2-6-12
528771016	SED-39P2-12-24
528771017	SED-39P2-24-36
528771018	SED-20P2-0-6
528771019	SED-20P2-6-12
528771020	SED-20P2-12-24
1204704012	528771001(SED-61P2-0-6) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2067342

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2067342

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771021	SED-20P2-24-32
1204704013	528771021(SED-20P2-24-32) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Liquid Scint Tc99, Soil

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2067816

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771001	SED-61P2-0-6
528771002	SED-61P2-0-6-DUP
528771003	SED-61P2-6-12
528771004	SED-61P2-12-18
528771005	SED-16P2-0-6
528771006	SED-16P2-6-12
528771007	SED-16P2-12-24
528771008	SED-60P2-0-6
528771009	SED-60P2-6-12
528771010	SED-40P2-0-6
528771011	SED-40P2-6-12
528771012	SED-40P2-12-24
528771013	SED-40P2-24-36
528771014	SED-39P2-0-6
528771015	SED-39P2-6-12
528771016	SED-39P2-12-24
528771017	SED-39P2-24-36
528771018	SED-20P2-0-6
528771019	SED-20P2-6-12
528771020	SED-20P2-12-24
1204705096	Method Blank (MB)
1204705097	528771003(SED-61P2-6-12) Sample Duplicate (DUP)
1204705098	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Recounts**

Sample 528771010 (SED-40P2-0-6) was recounted due to high MDC. The recount is reported. Samples 528771004 (SED-61P2-12-18), 528771006 (SED-16P2-6-12) and 528771007 (SED-16P2-12-24) were recounted to verify sample results. Recounts are reported.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2068822

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
528771021	SED-20P2-24-32
1204707248	Method Blank (MB)
1204707249	528771021(SED-20P2-24-32) Sample Duplicate (DUP)
1204707250	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

**Chain of Custody and Analytical Request**  
 GEL Project Manager: [Blank]  
 Photo # [Blank]  
 Fax # [Blank]  
 Send Results To: joynerdp@westinghouse.com

Sample ID	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code	Field Filtered	Sample Matrix	Radioactive (If Yes, please supply isotopic info)	Should this sample be considered:	Total number of containers	Sample Analysis Requested (6) (Fill in the number of containers for each test)	Preservative Type (6)	Comments
SED-6P2-0-6	11/18/20	1130	GED	N	SD			2	TC-99 Isotope U-235 Fluoride		Note: extra sample is required for sample specific QC
SED-6P2-6-12	11/18/20	1200	G <sup>120</sup>	N	SD			3			
SED-6P2-12-18	11/18/20	1230	G	N	SD			1			
SED-16P2-0-6	11/18/20	1400	G	N	SD			1			
SED-16P2-6-12	11/18/20	1410	G	N	SD			1			
SED-16P2-12-24	11/18/20	1420	G	N	SD			1			
SED-16AN SED-60P2-0-6	11/18/20	1500	G	N	SD			1			
SED-60P2-6-12	11/18/20	1515	G	N	SD			1			
SED-40P2-0-6	11/19/20	1030	G	N	SD			1			
SED-40P2-6-12	11/19/20	1040	G	N	SD			1			

**Chain of Custody Signatures**

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
Charles K. Sedeth	11/25/20	0849	R. Chen	11/25/20	0849
R. Chen	11/25/20	1030	R. Chen	11/25/20	1030
R. Chen	11/25/20	1515	R. Chen	11/25/20	1515

For sample shipping and delivery details, see Sample Receipt & Review form (SRR).

TAT Requested: Normal:  Rush:  Specify: \_\_\_\_\_ (Subject to Surcharges)

Fax Results:  Yes  No

Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4

Additional Remarks: AECOM EDD

For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: 2 °C

Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other:

1) Chain of Custody Number = Client Determined  
 2) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  
 4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Feecal, N=Nasal  
 5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B 7470A - 1)  
 6) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium T...  
 7) **KNOWN OR POSSIBLE HAZARDS**  
 Characteristic Hazards: [Blank]  
 Listed Waste: [Blank]  
 FL = Flammable/Ignitable  
 CO = Corrosive  
 RE = Reactive  
 TSCA Regulated  
 PCB = Polychlorinated biphenyls

**RCRA Metals**  
 AS = Arsenic  
 Ba = Barium  
 Cd = Cadmium  
 Cr = Chromium  
 Pb = Lead

**Hg = Mercury**  
**Se = Selenium**  
**Ag = Silver**  
**MR = Misc. RCRA metals**

**Other:**  
 OT = Other / Unknown  
 (i.e. High/Low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  
 Description: [Blank]

Please provide any additional details below regarding handling and/or disposal concerns. (i.e., Origin of sample(s), type of site collected from, odd matrices, etc.)



**SAMPLE RECEIPT & REVIEW FORM**

Client: WNUC SDG/AR/COC/Work Order: 528771 L.H.

Received By: Tye Date Received: 11/25/20

Carrier and Tracking Number

Circle Applicable:  
 FedEx Express    FedEx Ground    UPS    Field Services    Courier    Other

Suspected Hazard Information    Yes    No    \*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous?            Hazard Class Shipped:    UN#:    If UN2910, Is the Radioactive Shipment Survey Compliant? Yes \_\_\_ No \_\_\_

B) Did the client designate the samples are to be received as radioactive?            COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive?            Maximum Net Counts Observed\* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr  
 Classified as: Rad 1    Rad 2    Rad 3

D) Did the client designate samples are hazardous?            COC notation or hazard labels on containers equal client designation.

E) Did the RSO identify possible hazards?            If D or E is yes, select Hazards below.  
 PCB's    Flammable    Foreign Soil    RCRA    Asbestos    Beryllium    Other:

Sample Receipt Criteria    Yes    NA    No    Comments/Qualifiers (Required for Non-Conforming Items)

1 Shipping containers received intact and sealed?                Circle Applicable:    Seats broken    Damaged container    Leaking container    Other (describe)

2 Chain of custody documents included with shipment?                Circle Applicable:    Client contacted and provided COC    COC created upon receipt

3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?\*                Preservation Method: Wet Ice    Ice Packs    Dry ice    None    Other:    Chem - Wet  
 \*all temperatures are recorded in Celsius    TEMP: After -2°C

4 Daily check performed and passed on IR temperature gun?                Temperature Device Serial #: IR3-19  
 Secondary Temperature Device Serial # (If Applicable):

5 Sample containers intact and sealed?                Circle Applicable:    Seats broken    Damaged container    Leaking container    Other (describe)

6 Samples requiring chemical preservation at proper pH?                Sample ID's and Containers Affected:

7 Do any samples require Volatile Analysis?                    Preservation added. Lot#:    NA  
 Are Encores or Soil Kits present for solids? Yes \_\_\_ No  NA \* (If yes, take to VOA Freezer)  
 Are liquid VOA vials contain acid preservation? Yes \_\_\_ No \_\_\_ NA  (If unknown, select No)  
 Are liquid VOA vials free of headspace? Yes \_\_\_ No \_\_\_ NA   
 Sample ID's and containers affected: VOG containers are Ziploc baggies

8 Samples received within holding time?                ID's and tests affected:

9 Sample ID's on COC match ID's on bottles?                ID's and containers affected:

10 Date & time on COC match date & time on bottles?                Circle Applicable:    No dates on containers    No times on containers    COC missing info    Other (describe)

11 Number of containers received match number indicated on COC?                Circle Applicable:    No container count on COC    Other (describe)

12 Are sample containers identifiable as GEL provided by use of GEL labels?               

13 COC form is properly signed in relinquished/received sections?                Circle Applicable:    Not relinquished    Other (describe)

Comments (Use Continuation Form if needed):

**List of current GEL Certifications as of 18 December 2020**

<b>State</b>	<b>Certification</b>
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-33
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



January 05, 2021

Ms. Cynthia Teague  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Sediment and GW Campaign  
Work Order: 529649

Dear Ms. Teague:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 09, 2020. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: 4500778461  
Enclosures



## GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

### Certificate of Analysis Report for

WNUC009 Westinghouse Electric Co, LLC (4500778461)

Client SDG: 529649 GEL Work Order: 529649

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- J See case narrative for an explanation
- J Value is estimated
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- h Preparation or preservation holding time was exceeded

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*



## Analytical Detections Summary

<b>SDG/Report#</b>	529649	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
529649001	SED-44P2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	9.42 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	98.7 pCi/g	
			13968-55-3/1	Uranium-233/234	435 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	24.3 pCi/g	
	EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	1070 mg/kg	h	
		16984-48-8	Fluoride	32.3 mg/kg		
529649002	SED-44P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	4.33 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	8.74 pCi/g	
			13968-55-3/1	Uranium-233/234	34.0 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	1.57 pCi/g	
	EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	580 mg/kg	h	
		16984-48-8	Fluoride	19.3 mg/kg		
529649003	SED-44P2-12-18	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.7 pCi/g	
			13968-55-3/1	Uranium-233/234	3.34 pCi/g	
			3966-29-5			
	EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	299 mg/kg	h	
		16984-48-8	Fluoride	15.3 mg/kg		
529649004	SED-43P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.87 pCi/g	
			13968-55-3/1	Uranium-233/234	5.13 pCi/g	
			3966-29-5			
	EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	312 mg/kg	h	
		16984-48-8	Fluoride			
529649005	SED-43P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	4.5 pCi/g	
			13968-55-3/1	Uranium-233/234	16.0 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	0.873 pCi/g	
			3982-70-2			
	EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	499 mg/kg	h	
		16984-48-8	Fluoride	9.1 mg/kg		
529649006	SED-46P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.85 pCi/g	
			13968-55-3/1	Uranium-233/234	11.6 pCi/g	
			3966-29-5			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	1980 mg/kg	
		16984-48-8	Fluoride	120 mg/kg		
529649007	SED-46P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	3.55 pCi/g	
			13968-55-3/1	Uranium-233/234	10.4 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	0.419 pCi/g	
			3982-70-2			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	863 mg/kg	
		16984-48-8	Fluoride	20.6 mg/kg		

## Analytical Detections Summary

<b>SDG/Report#</b>	529649	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
529649008	SED-45P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.92 pCi/g	
			13968-55-3/1	Uranium-233/234	6.00 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	0.325 pCi/g	
			3982-70-2			
529649009	SED-45P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.48 pCi/g	
			13968-55-3/1	Uranium-233/234	2.95 pCi/g	
529649010	SED-19P2-0-6	DOE EML HASL-300, U-02-RC Modified	3966-29-5			
			15117-96-1/1	Uranium-235/236	1.02 pCi/g	
			3982-70-2			
			7664-41-7	Nitrogen, Ammonia	1520 mg/kg	
			16984-48-8	Fluoride	103 mg/kg	
529649011	SED-19P2-6-12	DOE EML HASL-300, Tc-02-RC Modified	7440-61-1	Uranium-238	6.42 pCi/g	
			13968-55-3/1	Uranium-233/234	27.0 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	1.22 pCi/g	
			3982-70-2			
529649012	SED-19P2-12-18	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.51 pCi/g	
			13968-55-3/1	Uranium-233/234	2.05 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	277 mg/kg	
			16984-48-8	Fluoride	3.98 mg/kg	
529649013	SED-50P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.65 pCi/g	
			13968-55-3/1	Uranium-233/234	6.83 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	0.351 pCi/g	
			3982-70-2			
529649014	SED-50P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.83 pCi/g	
			13968-55-3/1	Uranium-233/234	2.33 pCi/g	
			3966-29-5			
			7664-41-7	Nitrogen, Ammonia	382 mg/kg	
			16984-48-8	Fluoride	2.92 mg/kg	
529649015	SED-50P2-12-24	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	0.808 pCi/g	
			13968-55-3/1	Uranium-233/234	1.00 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	0.139 pCi/g	
			3982-70-2			
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	257 mg/kg	

## Analytical Detections Summary

<b>SDG/Report#</b>	529649	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q	
529649016	SED-49P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.25 pCi/g		
			13968-55-3/1	Uranium-233/234	5.1 pCi/g		
			3966-29-5				
				15117-96-1/1	Uranium-235/236	0.142 pCi/g	
				3982-70-2			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	378 mg/kg		
			16984-48-8	Fluoride	9.14 mg/kg		
529649017	SED-49P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.04 pCi/g		
			13968-55-3/1	Uranium-233/234	2.85 pCi/g		
			3966-29-5				
				7664-41-7	Nitrogen, Ammonia	280 mg/kg	
				EPA 350.1 Modified SC SW846 9056A	16984-48-8	Fluoride	5.78 mg/kg
529649018	SED-48P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.24 pCi/g		
			13968-55-3/1	Uranium-233/234	2.49 pCi/g		
			3966-29-5				
				7664-41-7	Nitrogen, Ammonia	491 mg/kg	
				EPA 350.1 Modified SC			
529649019	SED-48P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.77 pCi/g		
			13968-55-3/1	Uranium-233/234	2.11 pCi/g		
			3966-29-5				
				15117-96-1/1	Uranium-235/236	0.169 pCi/g	
				3982-70-2			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	112 mg/kg		
			16984-48-8	Fluoride	3.09 mg/kg		
529649020	SED-48P2-12-18	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.85 pCi/g		
			13968-55-3/1	Uranium-233/234	1.63 pCi/g		
			3966-29-5				
				15117-96-1/1	Uranium-235/236	0.205 pCi/g	
				3982-70-2			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	57.4 mg/kg		
			16984-48-8	Fluoride	1.88 mg/kg		
529649021	SED-47P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.95 pCi/g		
			13968-55-3/1	Uranium-233/234	3.32 pCi/g		
			3966-29-5				
				7664-41-7	Nitrogen, Ammonia	1200 mg/kg	
				EPA 350.1 Modified SC SW846 9056A	16984-48-8	Fluoride	6.37 mg/kg
529649022	SED-47P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.41 pCi/g		
			13968-55-3/1	Uranium-233/234	4.86 pCi/g		
			3966-29-5				
				7664-41-7	Nitrogen, Ammonia	1670 mg/kg	
				EPA 350.1 Modified SC SW846 9056A	16984-48-8	Fluoride	16.5 mg/kg
529649023	SED-59P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.88 pCi/g		
			13968-55-3/1	Uranium-233/234	2.09 pCi/g		
			3966-29-5				
529649024	SED-59P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.27 pCi/g		
			13968-55-3/1	Uranium-233/234	1.52 pCi/g		
			3966-29-5				
529649025	SED-58P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.37 pCi/g		
			13968-55-3/1	Uranium-233/234	1.21 pCi/g		
			3966-29-5				

## Analytical Detections Summary

<b>SDG/Report#</b>	529649	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
529649026	SED-58P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.15 pCi/g	
			13968-55-3/1 3966-29-5	Uranium-233/234	1.38 pCi/g	
529649027	SED-57P2-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.82 pCi/g	
			13968-55-3/1 3966-29-5	Uranium-233/234	2.22 pCi/g	
529649028	SED-57P2-6-12	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	1.74 pCi/g	
			13968-55-3/1 3966-29-5	Uranium-233/234	1.63 pCi/g	
529649029	SED-57P2-12-18	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.05 pCi/g	
			13968-55-3/1 3966-29-5	Uranium-233/234	1.49 pCi/g	

**NOTE:** This report only lists detections greater than the reporting level. Reporting level is the LOQ, PQL, MDC, or Client-provided limit.

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-44P2-0-6	Project:	WNUC01320
Sample ID:	529649001	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	01-DEC-20 11:15		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	88.9%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		32.3	2.86	8.41	mg/kg	9.30	1	LXA2	12/12/20	1821	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia	h	1070	25.8	71.6	mg/kg	31.6	5	KLP1	12/30/20	1501	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-44P2-6-12	Project:	WNUC01320
Sample ID:	529649002	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	01-DEC-20 11:30		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	84.9%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		19.3	2.10	6.18	mg/kg	9.30	1	LXA2	12/12/20	1950	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia	h	580	21.7	60.2	mg/kg	36.2	5	KLP1	12/30/20	1504	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-44P2-12-18      Project: WNUC01320  
Sample ID: 529649003      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 01-DEC-20 11:45  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 73.3%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		15.3	1.18	3.46	mg/kg	9.24	1	LXA2	12/12/20	2020	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia	h	299	10.0	27.9	mg/kg	29.8	5	KLP1	12/30/20	1505	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-43P2-0-6	Project:	WNUC01320
Sample ID:	529649004	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	01-DEC-20 15:00		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	71.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Ion Chromatography</b>												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.67	1.18	3.48	mg/kg	9.95	1	LXA2	12/12/20	2050	2071343	1
<b>Nutrient Analysis</b>												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia	h	312	7.87	21.9	mg/kg	25.0	5	KLP1	12/30/20	1506	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-43P2-6-12	Project:	WNUC01320
Sample ID:	529649005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	01-DEC-20 15:30		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	80.3%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		9.10	1.65	4.86	mg/kg	9.59	1	LXA2	12/12/20	2120	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia	h	499	12.3	34.1	mg/kg	26.9	5	KLP1	12/30/20	1507	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-46P2-0-6      Project: WNUC01320  
Sample ID: 529649006      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 02-DEC-20 13:30  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 89.4%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		120	3.18	9.35	mg/kg	9.90	1	LXA2	12/12/20	2150	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1980	28.7	79.7	mg/kg	33.8	5	KLP1	12/30/20	1507	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-46P2-6-12	Project:	WNUC01320
Sample ID:	529649007	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 14:00		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	83.8%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		20.6	1.97	5.81	mg/kg	9.39	1	LXA2	12/12/20	2319	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		863	11.6	32.2	mg/kg	20.8	5	KLP1	12/30/20	1508	2072719	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

---

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-45P2-0-6	Project:	WNUC01320
Sample ID:	529649008	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 14:15		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	87.3%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		103	2.63	7.74	mg/kg	9.85	1	LXA2	12/12/20	2349	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1520	21.8	60.7	mg/kg	30.9	5	KLP1	12/30/20	1509	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-45P2-6-12	Project:	WNUC01320
Sample ID:	529649009	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 15:00		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	75.7%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	U	ND	1.35	3.96	mg/kg	9.62	1	LXA2	12/13/20	0019	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		240	2.35	6.52	mg/kg	31.6	1	KLP1	12/30/20	1351	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-19P2-0-6	Project:	WNUC01320
Sample ID:	529649010	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 15:30		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	87.8%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		59.7	2.62	7.71	mg/kg	9.39	1	LXA2	12/13/20	0049	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		761	30.8	85.5	mg/kg	41.7	5	KLP1	12/30/20	1547	2072719	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

---

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Project: Sediment and GW Campaign

---

Client Sample ID:	SED-19P2-6-12	Project:	WNUC01320
Sample ID:	529649011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 15:50		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	87.6%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		28.5	2.51	7.39	mg/kg	9.15	1	LXA2	12/13/20	0118	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1100	15.5	43.1	mg/kg	21.4	5	KLP1	12/30/20	1548	2072719	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

---

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-19P2-12-18	Project:	WNUC01320
Sample ID:	529649012	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 16:10		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	68.6%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.98	1.04	3.04	mg/kg	9.57	1	LXA2	12/13/20	0148	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		277	9.81	27.2	mg/kg	34.2	5	KLP1	12/30/20	1549	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-50P2-0-6	Project:	WNUC01320
Sample ID:	529649013	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 11:30		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	83.9%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		7.00	2.16	6.36	mg/kg	10.2	1	LXA2	12/13/20	0218	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1130	14.3	39.7	mg/kg	25.5	5	KLP1	12/30/20	1550	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-50P2-6-12	Project:	WNUC01320
Sample ID:	529649014	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 11:45		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	66%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		2.92	0.953	2.80	mg/kg	9.52	1	LXA2	12/13/20	0248	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		382	9.89	27.5	mg/kg	37.3	5	KLP1	12/30/20	1551	2072719	2

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

---

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-50P2-12-24	Project:	WNUC01320
Sample ID:	529649015	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 12:00		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	59.4%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	2.51	0.861	2.53	mg/kg	10.3	1	LXA2	12/13/20	0318	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		257	9.89	27.5	mg/kg	44.6	5	KLP1	12/30/20	1552	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
 Project: Sediment and GW Campaign

Client Sample ID: SED-49P2-0-6	Project: WNUC01320
Sample ID: 529649016	Client ID: WNUC009
Matrix: Solid	
Collect Date: 03-DEC-20 12:45	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 77.7%	

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		9.14	1.40	4.11	mg/kg	9.15	1	LXA2	12/13/20	0547	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		378	5.49	15.2	mg/kg	13.6	5	KLP1	12/30/20	1554	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

**Notes:**

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-49P2-6-12      Project: WNUC01320  
Sample ID: 529649017      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 03-DEC-20 13:00  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 70.4%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		5.78	1.09	3.20	mg/kg	9.48	1	LXA2	12/13/20	0617	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		280	4.90	13.6	mg/kg	16.1	5	KLP1	12/30/20	1555	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-48P2-0-6	Project:	WNUC01320
Sample ID:	529649018	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 13:15		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	70.3%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride	J	1.86	1.09	3.21	mg/kg	9.52	1	LXA2	12/13/20	0646	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		491	9.25	25.7	mg/kg	30.5	5	KLP1	12/30/20	1600	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-48P2-6-12	Project:	WNUC01320
Sample ID:	529649019	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 13:25		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	36.8%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		3.09	0.518	1.52	mg/kg	9.62	1	LXA2	12/13/20	0716	2071343	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		112	1.08	3.00	mg/kg	37.9	1	KLP1	12/30/20	1406	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	CH5	12/11/20	2252	2071342

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-48P2-12-18	Project:	WNUC01320
Sample ID:	529649020	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 13:35		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	33.8%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		1.88	0.512	1.51	mg/kg	9.98	1	JLD1	12/12/20	0620	2071864	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		57.4	0.723	2.01	mg/kg	26.6	1	KLP1	12/30/20	1407	2072719	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/30/20	1255	2072718
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/10/20	1819	2071863

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

---

Client Sample ID:	SED-47P2-0-6	Project:	WNUC01320
Sample ID:	529649021	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 14:15		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	76%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		6.37	1.44	4.23	mg/kg	10.1	1	JLD1	12/12/20	0651	2071864	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1200	15.6	43.5	mg/kg	41.7	5	KLP1	12/21/20	1124	2072721	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/21/20	0930	2072720
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/10/20	1819	2071863

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-47P2-6-12	Project:	WNUC01320
Sample ID:	529649022	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 14:00		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	89.4%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		16.5	3.17	9.32	mg/kg	9.88	1	JLD1	12/12/20	0722	2071864	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		1670	23.1	64.1	mg/kg	27.2	5	KLP1	12/21/20	1125	2072721	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	KLP1	12/21/20	0930	2072720
SW846 9056A	SW846 9056A Total Anions in Soil	JLD1	12/10/20	1819	2071863

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-44P2-0-6	Project: WNUC01320
Sample ID: 529649001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 01-DEC-20 11:15	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 88.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, "Dry Weight Corrected"**

Uranium-233/234		435	+/-9.96	0.478	0.500	pCi/g			MP2	12/27/20	1014	2071910	1
Uranium-235/236		24.3	+/-2.62	0.220	0.500	pCi/g							
Uranium-238		98.7	+/-4.75	0.329	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99		9.42	+/-0.578	0.711	1.00	pCi/g			JJ3	12/20/20	1739	2072846	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			52.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			87.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-44P2-6-12	Project: WNUC01320
Sample ID: 529649002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 01-DEC-20 11:30	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 84.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		34.0	+/-2.35	0.270	0.500	pCi/g		MP2		12/27/20	1023	2071910	1
Uranium-235/236		1.57	+/-0.578	0.317	0.500	pCi/g							
Uranium-238		8.74	+/-1.19	0.277	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		4.33	+/-0.528	0.765	1.00	pCi/g		JJ3		12/20/20	1900	2072846	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			83.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-44P2-12-18      Project: WNUC01320  
Sample ID: 529649003      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 01-DEC-20 11:45  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 73.3%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		3.34	+/-0.641	0.238	0.500	pCi/g			MP2	12/27/20	1023	2071910	1
Uranium-235/236	U	0.0293	+/-0.110	0.185	0.500	pCi/g							
Uranium-238		2.70	+/-0.574	0.173	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.559	+/-0.446	0.782	1.00	pCi/g			JJ3	12/20/20	2021	2072846	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			89.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			78.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-43P2-0-6	Project: WNUC01320
Sample ID: 529649004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 01-DEC-20 15:00	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 71.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		5.13	+/-0.853	0.327	0.500	pCi/g			MP2	12/27/20	1023	2071910	1
Uranium-235/236	U	0.211	+/-0.215	0.212	0.500	pCi/g							
Uranium-238		1.87	+/-0.517	0.219	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.226	+/-0.460	0.778	1.00	pCi/g			JJ3	12/20/20	2142	2072846	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			81.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-43P2-6-12	Project: WNUC01320
Sample ID: 529649005	Client ID: WNUC009
Matrix: Solid	
Collect Date: 01-DEC-20 15:30	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 80.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, "Dry Weight Corrected"**

Uranium-233/234		16.0	+/-1.68	0.309	0.500	pCi/g			MP2	12/27/20	1023	2071910	1
Uranium-235/236		0.873	+/-0.457	0.312	0.500	pCi/g							
Uranium-238		4.50	+/-0.893	0.218	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.00633	+/-0.477	0.817	1.00	pCi/g			JJ3	12/20/20	2303	2072846	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			81.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.4	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-46P2-0-6	Project: WNUC01320
Sample ID: 529649006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-20 13:30	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 89.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		11.6	+/-1.43	0.392	0.500	pCi/g			MP2	12/27/20	1023	2071910	1
Uranium-235/236	U	0.251	+/-0.270	0.307	0.500	pCi/g							
Uranium-238		2.85	+/-0.710	0.248	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.289	+/-0.430	0.745	1.00	pCi/g			JJ3	12/21/20	0025	2072846	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			72.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			86.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-46P2-6-12	Project: WNUC01320
Sample ID: 529649007	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-20 14:00	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 83.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, "Dry Weight Corrected"**

Uranium-233/234		10.4	+/-1.33	0.279	0.500	pCi/g		MP2	12/27/20	1023	2071910		1
Uranium-235/236		0.419	+/-0.320	0.259	0.500	pCi/g							
Uranium-238		3.55	+/-0.781	0.267	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.110	+/-0.425	0.723	1.00	pCi/g		JJ3	12/21/20	0146	2072846		2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			84.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			83.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-45P2-0-6	Project: WNUC01320
Sample ID: 529649008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-20 14:15	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 87.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, "Dry Weight Corrected"**

Uranium-233/234		6.00	+/-1.04	0.403	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236		0.325	+/-0.295	0.271	0.500	pCi/g							
Uranium-238		1.92	+/-0.596	0.301	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	-0.341	+/-0.443	0.770	1.00	pCi/g			JJ3	12/21/20	0420	2072846	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			81.9	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			81.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-45P2-6-12      Project: WNUC01320  
Sample ID: 529649009      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 02-DEC-20 15:00  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 75.7%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		2.95	+/-0.719	0.300	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236	U	0.0545	+/-0.153	0.164	0.500	pCi/g							
Uranium-238		1.48	+/-0.513	0.244	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.433	+/-0.458	0.798	1.00	pCi/g			JJ3	12/21/20	0541	2072846	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			82.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			81.5	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-19P2-0-6	Project:	WNUC01320
Sample ID:	529649010	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 15:30		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	87.8%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		19.1	+/-1.80	0.345	0.500	pCi/g		MP2		12/27/20	1024	2071910	1
Uranium-235/236		1.02	+/-0.477	0.260	0.500	pCi/g							
Uranium-238		5.15	+/-0.938	0.243	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.208	+/-0.408	0.691	1.00	pCi/g		JJ3		12/21/20	0702	2072846	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			86.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			85	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-19P2-6-12	Project:	WNUC01320
Sample ID:	529649011	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	02-DEC-20 15:50		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	87.6%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		27.0	+/-2.27	0.330	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236		1.22	+/-0.549	0.183	0.500	pCi/g							
Uranium-238		6.42	+/-1.11	0.325	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.12	+/-0.498	0.819	1.00	pCi/g			JJ3	12/23/20	1929	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			72.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			86.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-19P2-12-18	Project: WNUC01320
Sample ID: 529649012	Client ID: WNUC009
Matrix: Solid	
Collect Date: 02-DEC-20 16:10	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 68.6%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.05	+/-0.507	0.250	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236	U	0.0675	+/-0.133	0.184	0.500	pCi/g							
Uranium-238		1.51	+/-0.431	0.172	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.502	+/-0.573	0.986	1.00	pCi/g			JJ3	12/21/20	0238	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			91.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			81.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-50P2-0-6	Project:	WNUC01320
Sample ID:	529649013	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 11:30		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	83.9%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		6.83	+/-1.23	0.336	0.500	pCi/g		MP2		12/27/20	1024	2071910	1
Uranium-235/236		0.351	+/-0.338	0.210	0.500	pCi/g							
Uranium-238		2.65	+/-0.772	0.272	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.550	+/-0.514	0.888	1.00	pCi/g		JJ3		12/21/20	0554	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			52	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			84.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-50P2-6-12	Project: WNUC01320
Sample ID: 529649014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 03-DEC-20 11:45	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 66%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.33	+/-0.574	0.291	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236	U	0.152	+/-0.192	0.239	0.500	pCi/g							
Uranium-238		1.83	+/-0.503	0.193	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.436	+/-0.551	0.948	1.00	pCi/g			JJ3	12/23/20	2133	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			89.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-50P2-12-24	Project: WNUC01320
Sample ID: 529649015	Client ID: WNUC009
Matrix: Solid	
Collect Date: 03-DEC-20 12:00	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 59.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, "Dry Weight Corrected"**

Uranium-233/234		1.00	+/-0.397	0.256	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236		0.139	+/-0.183	0.139	0.500	pCi/g							
Uranium-238		0.808	+/-0.363	0.277	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	-0.247	+/-0.539	0.923	1.00	pCi/g			JJ3	12/23/20	2338	2072847	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			81.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			78.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
 Project: Sediment and GW Campaign

Client Sample ID:	SED-49P2-0-6	Project:	WNUC01320
Sample ID:	529649016	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 12:45		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	77.7%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		5.10	+/-0.874	0.249	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236		0.142	+/-0.187	0.142	0.500	pCi/g							
Uranium-238		2.25	+/-0.583	0.184	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.378	+/-0.489	0.841	1.00	pCi/g			JJ3	12/21/20	1208	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.8	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			83.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-49P2-6-12      Project: WNUC01320  
Sample ID: 529649017      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 03-DEC-20 13:00  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 70.4%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.85	+/-0.635	0.292	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236	U	0.0436	+/-0.122	0.131	0.500	pCi/g							
Uranium-238		2.04	+/-0.537	0.247	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.741	+/-0.553	0.959	1.00	pCi/g			JJ3	12/21/20	1413	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			86	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-48P2-0-6 Project: WNUC01320  
Sample ID: 529649018 Client ID: WNUC009  
Matrix: Solid  
Collect Date: 03-DEC-20 13:15  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 70.3%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		2.49	+/-0.678	0.365	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236	U	0.154	+/-0.222	0.268	0.500	pCi/g							
Uranium-238		2.24	+/-0.635	0.251	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	-0.771	+/-0.547	0.949	1.00	pCi/g			JJ3	12/21/20	1618	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			64.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			78.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor                      Lc/LC: Critical Level  
DL: Detection Limit                      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-48P2-6-12	Project:	WNUC01320
Sample ID:	529649019	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	03-DEC-20 13:25		
Receive Date:	09-DEC-20		
Collector:	Client		
Moisture:	36.8%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.11	+/-0.621	0.275	0.500	pCi/g			MP2	12/27/20	1024	2071910	1
Uranium-235/236		0.169	+/-0.223	0.169	0.500	pCi/g							
Uranium-238		1.77	+/-0.567	0.219	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.665	+/-0.593	1.03	1.00	pCi/g			JJ3	12/21/20	1823	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			56.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			72.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-48P2-12-18      Project: WNUC01320  
Sample ID: 529649020      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 03-DEC-20 13:35  
Receive Date: 09-DEC-20  
Collector: Client  
Moisture: 33.8%

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.63	+/-0.427	0.213	0.500	pCi/g			MP2	12/27/20	1031	2071910	1
Uranium-235/236		0.205	+/-0.178	0.102	0.500	pCi/g							
Uranium-238		1.85	+/-0.446	0.0827	0.500	pCi/g							

### Rad Liquid Scintillation Analysis

#### Liquid Scint Tc99, Soil "As Received"

Technetium-99	U	-0.715	+/-0.548	0.951	1.00	pCi/g			JJ3	12/21/20	2028	2072847	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0652	2071377

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			94.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			70.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-47P2-0-6	Project: WNUC01320
Sample ID: 529649021	Client ID: WNUC009
Matrix: Solid	
Collect Date: 03-DEC-20 14:15	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 76%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		3.32	+/-0.750	0.289	0.500	pCi/g			BXA4	12/24/20	0818	2071911	1
Uranium-235/236	U	0.0528	+/-0.149	0.158	0.500	pCi/g							
Uranium-238		1.95	+/-0.575	0.237	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.663	+/-0.511	0.886	1.00	pCi/g			JJ3	12/21/20	2232	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			76.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			82.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-47P2-6-12	Project: WNUC01320
Sample ID: 529649022	Client ID: WNUC009
Matrix: Solid	
Collect Date: 03-DEC-20 14:00	
Receive Date: 09-DEC-20	
Collector: Client	
Moisture: 89.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		4.86	+/-0.880	0.305	0.500	pCi/g			BXA4	12/24/20	0818	2071911	1
Uranium-235/236	U	0.0999	+/-0.171	0.150	0.500	pCi/g							
Uranium-238		2.41	+/-0.620	0.224	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.418	+/-0.501	0.863	1.00	pCi/g			JJ3	12/22/20	0037	2072847	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			75.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			85.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-59P2-0-6 Project: WNUC01320  
Sample ID: 529649023 Client ID: WNUC009  
Matrix: Solid  
Collect Date: 03-DEC-20 16:00  
Receive Date: 09-DEC-20  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		2.09	+/-0.591	0.264	0.500	pCi/g			BXA4	12/24/20	0818	2071911	1
Uranium-235/236	U	0.0517	+/-0.145	0.155	0.500	pCi/g							
Uranium-238		1.88	+/-0.556	0.125	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			76.7	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor                      Lc/LC: Critical Level  
DL: Detection Limit                      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-59P2-6-12      Project: WNUC01320  
Sample ID: 529649024      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 03-DEC-20 16:15  
Receive Date: 09-DEC-20  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.52	+/-0.496	0.253	0.500	pCi/g			BXA4	12/24/20	0819	2071911	1
Uranium-235/236	U	0.0494	+/-0.139	0.148	0.500	pCi/g							
Uranium-238		1.27	+/-0.451	0.192	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			81.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-58P2-0-6	Project:	WNUC01320
Sample ID:	529649025	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	04-DEC-20 09:20		
Receive Date:	09-DEC-20		
Collector:	Client		

---

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.21	+/-0.543	0.439	0.500	pCi/g			BXA4	12/24/20	0819	2071911	1
Uranium-235/236	U	0.0516	+/-0.194	0.326	0.500	pCi/g							
Uranium-238		1.37	+/-0.550	0.165	0.500	pCi/g							

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

---

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

---

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			55.1	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-58P2-6-12	Project: WNUC01320
Sample ID: 529649026	Client ID: WNUC009
Matrix: Solid	
Collect Date: 04-DEC-20 09:30	
Receive Date: 09-DEC-20	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.38	+/-0.447	0.303	0.500	pCi/g			BXA4	12/24/20	0819	2071911	1
Uranium-235/236	U	0.0321	+/-0.120	0.202	0.500	pCi/g							
Uranium-238		1.15	+/-0.397	0.164	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.1	(15%-125%)

**Notes:**  
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-57P2-0-6	Project:	WNUC01320
Sample ID:	529649027	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	04-DEC-20 10:00		
Receive Date:	09-DEC-20		
Collector:	Client		

---

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		2.22	+/-0.673	0.333	0.500	pCi/g				BXA4	12/26/20	0838 2071911	1
Uranium-235/236	U	0.110	+/-0.216	0.300	0.500	pCi/g							
Uranium-238		1.82	+/-0.603	0.152	0.500	pCi/g							

The following Prep Methods were performed:

---

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

---

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

---

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			66.4	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-57P2-6-12	Project: WNUC01320
Sample ID: 529649028	Client ID: WNUC009
Matrix: Solid	
Collect Date: 04-DEC-20 10:05	
Receive Date: 09-DEC-20	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.63	+/-0.521	0.277	0.500	pCi/g			BXA4	12/26/20	0838	2071911	1
Uranium-235/236	U	0.101	+/-0.173	0.152	0.500	pCi/g							
Uranium-238		1.74	+/-0.533	0.227	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			77.6	(15%-125%)

**Notes:**  
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: January 5, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-57P2-12-18	Project:	WNUC01320
Sample ID:	529649029	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	04-DEC-20 10:10		
Receive Date:	09-DEC-20		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		1.49	+/-0.526	0.357	0.500	pCi/g			BXA4	12/26/20	0838	2071911	1
Uranium-235/236	U	0.000	+/-0.109	0.163	0.500	pCi/g							
Uranium-238		2.05	+/-0.597	0.210	0.500	pCi/g							

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	12/10/20	0655	2071378

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			71.9	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: January 5, 2021

Page 1 of 3

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 529649

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2071343										
QC1204712276	529649015	DUP									
Fluoride	J	2.51		2.83	mg/kg	12 ^		(+/-2.30)	LXA2	12/13/20	03:47
QC1204712278	529649001	DUP									
Fluoride		32.3		32.0	mg/kg	0.883 ^		(+/-8.66)		12/12/20	18:51
QC1204712275	LCS										
Fluoride	23.4			22.1	mg/kg		94.5	(90%-110%)		12/12/20	17:51
QC1204712274	MB										
Fluoride			U	ND	mg/kg					12/12/20	17:21
QC1204712277	529649015	MS									
Fluoride	63.3 J	2.51		12.3	mg/kg		15.4*	(75%-125%)		12/13/20	05:17
QC1204712279	529649001	MS									
Fluoride	221	32.3		148	mg/kg		52.2*	(75%-125%)		12/12/20	19:20
<hr/>											
Batch	2071864										
QC1204713216	529522001	DUP									
Fluoride	J	0.484	J	0.543	mg/kg	11.6 ^		(+/-1.21)	JLD1	12/12/20	01:42
QC1204713215	LCS										
Fluoride	25.1			24.7	mg/kg		98.5	(90%-110%)		12/11/20	22:07
QC1204713214	MB										
Fluoride			U	ND	mg/kg					12/11/20	21:36
QC1204713219	529522001	MS									
Fluoride	29.7 J	0.484		19.8	mg/kg		65.3*	(75%-125%)		12/12/20	02:13

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 529649

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Nutrient Analysis</b>											
Batch	2072719										
QC1204715009	529649015	DUP									
Nitrogen, Ammonia		257		278	mg/kg	200*			KLP1	12/30/20	15:53
QC1204715011	529649001	DUP									
Nitrogen, Ammonia	h	1070	h	728	mg/kg	38*		(0%-20%)		12/30/20	15:02
QC1204715008	LCS										
Nitrogen, Ammonia	50.0			53.5	mg/kg		107	(90%-110%)		12/30/20	13:38
QC1204715007	MB										
Nitrogen, Ammonia			J	1.01	mg/kg					12/30/20	13:37
QC1204715010	529649015	MS									
Nitrogen, Ammonia	106	257		394	mg/kg		130*	(90%-110%)		12/30/20	15:53
QC1204715012	529649001	MS									
Nitrogen, Ammonia	371	h	1070	h	1350	mg/kg		74.7* (90%-110%)		12/30/20	15:03
<hr/>											
Batch	2072721										
QC1204715015	529433006	DUP									
Nitrogen, Ammonia		4.47	J	1.59	mg/kg	94.9*^		(+/-1.79)	KLP1	12/21/20	10:55
QC1204715014	LCS										
Nitrogen, Ammonia	50.0			48.1	mg/kg		96.2	(90%-110%)		12/21/20	10:53
QC1204715013	MB										
Nitrogen, Ammonia			J	1.78	mg/kg					12/21/20	10:52
QC1204715016	529433006	MS									
Nitrogen, Ammonia	44.5	4.47		48.1	mg/kg		97.9	(90%-110%)		12/21/20	10:56

**Notes:**

The Qualifiers in this report are defined as follows:

< Result is less than value reported

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## QC Summary

Workorder: 529649

Page 3 of 3

Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>											
B											
E											
H											
J											
J											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
X											
Z											
^											
d											
e											
h											

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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## QC Summary

Report Date: January 5, 2021

Page 1 of 6

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 529649

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2071343										
QC1204712276	529649015	DUP									
Fluoride	J	2.51		2.83	mg/kg	12 ^		(+/-2.30)	LXA2	12/13/20	03:47
QC1204712278	529649001	DUP									
Fluoride		32.3		32.0	mg/kg	0.883 ^		(+/-8.66)		12/12/20	18:51
QC1204712275	LCS										
Fluoride	23.4			22.1	mg/kg		94.5	(90%-110%)		12/12/20	17:51
QC1204712274	MB										
Fluoride			U	0.000	mg/kg					12/12/20	17:21
QC1204712277	529649015	MS									
Fluoride	63.3 J	2.51		12.3	mg/kg		15.4*	(75%-125%)		12/13/20	05:17
QC1204712279	529649001	MS									
Fluoride	221	32.3		148	mg/kg		52.2*	(75%-125%)		12/12/20	19:20
<hr/>											
Batch	2071864										
QC1204713216	529522001	DUP									
Fluoride	J	0.484	J	0.543	mg/kg	11.6 ^		(+/-1.21)	JLD1	12/12/20	01:42
QC1204713215	LCS										
Fluoride	25.1			24.7	mg/kg		98.5	(90%-110%)		12/11/20	22:07
QC1204713214	MB										
Fluoride			U	0.000	mg/kg					12/11/20	21:36
QC1204713219	529522001	MS									
Fluoride	29.7 J	0.484		19.8	mg/kg		65.3*	(75%-125%)		12/12/20	02:13

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## QC Summary

Workorder: 529649

Page 2 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Nutrient Analysis</b>											
Batch	2072719										
QC1204715009	529649015	DUP									
Nitrogen, Ammonia		257		278	mg/kg	200*			KLP1	12/30/20	15:53
QC1204715011	529649001	DUP									
Nitrogen, Ammonia	h	1070	h	728	mg/kg	38*		(0%-20%)		12/30/20	15:02
QC1204715008	LCS										
Nitrogen, Ammonia	50.0			53.5	mg/kg		107	(90%-110%)		12/30/20	13:38
QC1204715007	MB										
Nitrogen, Ammonia			J	1.01	mg/kg					12/30/20	13:37
QC1204715010	529649015	MS									
Nitrogen, Ammonia	106	257		394	mg/kg		130*	(90%-110%)		12/30/20	15:53
QC1204715012	529649001	MS									
Nitrogen, Ammonia	371	h	1070	h	1350	mg/kg		74.7* (90%-110%)		12/30/20	15:03
Batch	2072721										
QC1204715015	529433006	DUP									
Nitrogen, Ammonia		4.47	J	1.59	mg/kg	94.9*^		(+/-1.79)	KLP1	12/21/20	10:55
QC1204715014	LCS										
Nitrogen, Ammonia	50.0			48.1	mg/kg		96.2	(90%-110%)		12/21/20	10:53
QC1204715013	MB										
Nitrogen, Ammonia			J	1.78	mg/kg					12/21/20	10:52
QC1204715016	529433006	MS									
Nitrogen, Ammonia	44.5	4.47		48.1	mg/kg		97.9	(90%-110%)		12/21/20	10:56

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## QC Summary

Workorder: 529649

Page 3 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<hr/>											
Rad Alpha Spec											
Batch	2071910										
QC1204713275	529649015	DUP									
Uranium-233/234		1.00		1.90	pCi/g	61.8*		(0%-20%)	MP2	12/27/20	10:31
Uranium-235/236		0.139	U	0.116	pCi/g	77.7		N/A			
Uranium-238		0.808		1.69	pCi/g	70.7*		(0%-20%)			
QC1204713276	LCS										
Uranium-233/234				9.21	pCi/g					12/27/20	10:31
Uranium-235/236				0.521	pCi/g						
Uranium-238	9.50			10.2	pCi/g		108	(75%-125%)			
QC1204713274	MB										
Uranium-233/234			U	-0.0361	pCi/g					12/27/20	10:31
Uranium-235/236			U	-0.00769	pCi/g						
Uranium-238			U	0.00104	pCi/g						
<hr/>											
Batch	2071911										
QC1204713284	529649021	DUP									
Uranium-233/234		3.32		3.58	pCi/g	7.4		(0%-20%)	BXA4	01/04/21	13:42
Uranium-235/236		U	0.0528	U	0.108	pCi/g	N/A		N/A		
Uranium-238		1.95		1.52	pCi/g	24.4*		(0%-20%)			
QC1204713285	LCS										
Uranium-233/234				9.71	pCi/g					12/26/20	08:39
Uranium-235/236				0.422	pCi/g						

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## QC Summary

Workorder: 529649

Page 4 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	2071911										
Uranium-238	10.9			11.1	pCi/g		101	(75%-125%)	BXA4	12/26/20	08:39
QC1204713283	MB										
Uranium-233/234			U	0.138	pCi/g					12/26/20	08:39
Uranium-235/236			U	-0.0242	pCi/g						
Uranium-238			U	0.0637	pCi/g						
<b>Rad Liquid Scintillation</b>											
Batch	2072846										
QC1204715354	529649001	DUP									
Technetium-99			9.42	10.1	pCi/g	6.79		(0%-20%)	JJ3	12/21/20	09:44
QC1204715355	LCS										
Technetium-99	28.4			27.9	pCi/g		98.1	(75%-125%)		12/21/20	11:06
QC1204715353	MB										
Technetium-99			U	-0.287	pCi/g					12/21/20	08:23
Batch	2072847										
QC1204715357	529649015	DUP									
Technetium-99		U	-0.247	U	-0.327	pCi/g	N/A		N/A	JJ3	12/24/20 01:42
QC1204715358	LCS										
Technetium-99	28.3			29.1	pCi/g		103	(75%-125%)		12/22/20	07:59
QC1204715356	MB										
Technetium-99			U	-0.617	pCi/g					12/22/20	02:42

### Notes:

The Qualifiers in this report are defined as follows:

\*\* Analyte is a Tracer compound

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## QC Summary

Workorder: 529649

Page 5 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<											
>											
B											
BD											
E											
FA											
H											
J											
J											
K											
L											
M											
M											
N/A											
N1											
ND											
NJ											
Q											
R											
R											
U											
UI											
UJ											
UL											
X											
Y											
Z											
^											
d											
e											
h											



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## QC Summary

Workorder: 529649

Page 6 of 6

<u>Parmname</u>	<u>NOM</u>	<u>Sample Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
-----------------	------------	--------------------	-----------	--------------	-------------	-------------	--------------	--------------	-------------	-------------

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 529649**

## **General Chemistry**

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 28

**Analytical Batches:** 2071343 and 2071342

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649001	SED-44P2-0-6
529649002	SED-44P2-6-12
529649003	SED-44P2-12-18
529649004	SED-43P2-0-6
529649005	SED-43P2-6-12
529649006	SED-46P2-0-6
529649007	SED-46P2-6-12
529649008	SED-45P2-0-6
529649009	SED-45P2-6-12
529649010	SED-19P2-0-6
529649011	SED-19P2-6-12
529649012	SED-19P2-12-18
529649013	SED-50P2-0-6
529649014	SED-50P2-6-12
529649015	SED-50P2-12-24
529649016	SED-49P2-0-6
529649017	SED-49P2-6-12
529649018	SED-48P2-0-6
529649019	SED-48P2-6-12
1204712274	Method Blank (MB)
1204712275	Laboratory Control Sample (LCS)
1204712276	529649015(SED-50P2-12-24) Sample Duplicate (DUP)
1204712277	529649015(SED-50P2-12-24) Matrix Spike (MS)
1204712278	529649001(SED-44P2-0-6) Sample Duplicate (DUP)
1204712279	529649001(SED-44P2-0-6) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Quality Control (QC) Information**

#### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204712277 (SED-50P2-12-24MS)	15.4* (75%-125%)
	1204712279 (SED-44P2-0-6MS)	52.2* (75%-125%)

**Product: Ion Chromatography**

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 28

**Analytical Batches:** 2071864 and 2071863

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649020	SED-48P2-12-18
529649021	SED-47P2-0-6
529649022	SED-47P2-6-12
1204713214	Method Blank (MB)
1204713215	Laboratory Control Sample (LCS)
1204713216	529522001(NonSDG) Sample Duplicate (DUP)
1204713219	529522001(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

Analyte	Sample	Value
Fluoride	1204713219 (Non SDG 529522001MS)	65.3* (75%-125%)

**Product: Ammonia Nitrogen**

**Analytical Method:** EPA 350.1 Modified SC

**Analytical Procedure:** GL-GC-E-106 REV# 10

**Analytical Batch:** 2072719

**Preparation Method:** EPA 350.1 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 2072718

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649001	SED-44P2-0-6
529649002	SED-44P2-6-12
529649003	SED-44P2-12-18
529649004	SED-43P2-0-6
529649005	SED-43P2-6-12
529649006	SED-46P2-0-6
529649007	SED-46P2-6-12
529649008	SED-45P2-0-6
529649009	SED-45P2-6-12
529649010	SED-19P2-0-6
529649011	SED-19P2-6-12
529649012	SED-19P2-12-18
529649013	SED-50P2-0-6
529649014	SED-50P2-6-12
529649015	SED-50P2-12-24
529649016	SED-49P2-0-6
529649017	SED-49P2-6-12
529649018	SED-48P2-0-6
529649019	SED-48P2-6-12
529649020	SED-48P2-12-18
1204715007	Method Blank (MB)
1204715008	Laboratory Control Sample (LCS)
1204715009	529649015(SED-50P2-12-24) Sample Duplicate (DUP)
1204715010	529649015(SED-50P2-12-24) Matrix Spike (MS)
1204715011	529649001(SED-44P2-0-6) Sample Duplicate (DUP)
1204715012	529649001(SED-44P2-0-6) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

<b>Analyte</b>	<b>Sample</b>	<b>Value</b>
Nitrogen, Ammonia	1204715010 (SED-50P2-12-24MS)	130* (90%-110%)
	1204715012 (SED-44P2-0-6MS)	74.7* (90%-110%)

**Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Nitrogen, Ammonia	1204715009 (SED-50P2-12-24DUP)	200* (0%-20%)
	1204715011 (SED-44P2-0-6DUP)	38* (0%-20%)

**Technical Information**

**Sample Dilutions**

The following samples 1204715009 (SED-50P2-12-24DUP), 1204715010 (SED-50P2-12-24MS), 1204715011 (SED-44P2-0-6DUP), 1204715012 (SED-44P2-0-6MS), 529649001 (SED-44P2-0-6), 529649002 (SED-44P2-6-12), 529649003 (SED-44P2-12-18), 529649004 (SED-43P2-0-6), 529649005 (SED-43P2-6-12), 529649006 (SED-46P2-0-6), 529649007 (SED-46P2-6-12), 529649008 (SED-45P2-0-6), 529649010 (SED-19P2-0-6), 529649011 (SED-19P2-6-12), 529649012 (SED-19P2-12-18), 529649013 (SED-50P2-0-6), 529649014 (SED-50P2-6-12), 529649015 (SED-50P2-12-24), 529649016 (SED-49P2-0-6), 529649017 (SED-49P2-6-12) and 529649018 (SED-48P2-0-6) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	529649									
	001	002	003	004	005	006	007	008	010	011
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X	5X	5X	5X

Analyte	529649						
	012	013	014	015	016	017	018
Nitrogen, Ammonia	5X	5X	5X	5X	5X	5X	5X

**Sample Re-analysis**

Samples 1204715009 (SED-50P2-12-24DUP), 1204715010 (SED-50P2-12-24MS), 529649010 (SED-19P2-0-6), 529649011 (SED-19P2-6-12), 529649012 (SED-19P2-12-18), 529649013 (SED-50P2-0-6), 529649014 (SED-50P2-6-12), 529649015 (SED-50P2-12-24), 529649016 (SED-49P2-0-6) and 529649017 (SED-49P2-6-12) were re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

**Product: Ammonia Nitrogen**

**Analytical Method:** EPA 350.1 Modified SC

**Analytical Procedure:** GL-GC-E-106 REV# 10

**Analytical Batch:** 2072721

**Preparation Method:** EPA 350.1 Modified Prep

**Preparation Procedure:** GL-GC-E-072 REV# 18

**Preparation Batch:** 2072720

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649021	SED-47P2-0-6
529649022	SED-47P2-6-12
1204715013	Method Blank (MB)
1204715014	Laboratory Control Sample (LCS)

1204715015                    529433006(NonSDG) Sample Duplicate (DUP)  
 1204715016                    529433006(NonSDG) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Method Blank (MB) Statement**

The MB (See Below) analyzed with this SDG met the acceptance criteria. In instances where there were positive hits in the method blank, the results were evaluated and appropriately flagged on the data.

Sample	Analyte	Value
1204715013 (MB)	Nitrogen, Ammonia	1.78 between (0.9 - 2.5)

**Duplicate Relative Percent Difference (RPD) Statement**

The Relative Percent Difference (RPD) between the sample and duplicate falls outside of the established acceptance limits because of the heterogeneous matrix of the sample:

Analyte	Sample	Value
Nitrogen, Ammonia	1204715015 (Non SDG 529433006DUP)	abs(1.59 - 4.47)* (+/-1.79 mg/kg)

**Technical Information**

**Sample Dilutions**

The following samples 529649021 (SED-47P2-0-6) and 529649022 (SED-47P2-6-12) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	529649	
	021	022
Nitrogen, Ammonia	5X	5X

**Sample Re-analysis**

Samples 529649021 (SED-47P2-0-6) and 529649022 (SED-47P2-6-12) were re-analyzed due to CCV failure. The reanalysis data with passing instrument QC was reported.

**Radiochemistry**

**Product: Alphaspec U,**

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 28

**Analytical Batch:** 2071910

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2071377

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649001	SED-44P2-0-6
529649002	SED-44P2-6-12
529649003	SED-44P2-12-18
529649004	SED-43P2-0-6
529649005	SED-43P2-6-12
529649006	SED-46P2-0-6
529649007	SED-46P2-6-12
529649008	SED-45P2-0-6
529649009	SED-45P2-6-12
529649010	SED-19P2-0-6
529649011	SED-19P2-6-12
529649012	SED-19P2-12-18
529649013	SED-50P2-0-6
529649014	SED-50P2-6-12
529649015	SED-50P2-12-24
529649016	SED-49P2-0-6
529649017	SED-49P2-6-12
529649018	SED-48P2-0-6
529649019	SED-48P2-6-12
529649020	SED-48P2-12-18
1204713274	Method Blank (MB)
1204713275	529649015(SED-50P2-12-24) Sample Duplicate (DUP)
1204713276	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204713275 (SED-50P2-12-24DUP)	Uranium-233/234	RPD 61.8* (0.00%-20.00%) RER 2.1 (0-3)
	Uranium-238	RPD 70.7* (0.00%-20.00%) RER 2.26 (0-3)

**Product:** Alphaspec U,  
**Analytical Method:** DOE EML HASL-300, U-02-RC Modified  
**Analytical Procedure:** GL-RAD-A-011 REV# 28  
**Analytical Batch:** 2071911

**Preparation Method:** Dry Soil Prep  
**Preparation Procedure:** GL-RAD-A-021 REV# 24  
**Preparation Batch:** 2071378

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649021	SED-47P2-0-6
529649022	SED-47P2-6-12
529649023	SED-59P2-0-6
529649024	SED-59P2-6-12
529649025	SED-58P2-0-6
529649026	SED-58P2-6-12
529649027	SED-57P2-0-6
529649028	SED-57P2-6-12
529649029	SED-57P2-12-18
1204713283	Method Blank (MB)
1204713284	529649021(SED-47P2-0-6) Sample Duplicate (DUP)
1204713285	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204713284 (SED-47P2-0-6DUP)	Uranium-238	RPD 24.4* (0.00%-20.00%) RER 0.96 (0-3)

**Technical Information**

**Recounts**

Sample 1204713284 (SED-47P2-0-6DUP) was recounted due to high MDC. The recount is reported.



**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2071377

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2071377

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649001	SED-44P2-0-6
529649002	SED-44P2-6-12
529649003	SED-44P2-12-18
529649004	SED-43P2-0-6
529649005	SED-43P2-6-12
529649006	SED-46P2-0-6
529649007	SED-46P2-6-12
529649008	SED-45P2-0-6
529649009	SED-45P2-6-12
529649010	SED-19P2-0-6
529649011	SED-19P2-6-12
529649012	SED-19P2-12-18
529649013	SED-50P2-0-6
529649014	SED-50P2-6-12
529649015	SED-50P2-12-24
529649016	SED-49P2-0-6
529649017	SED-49P2-6-12
529649018	SED-48P2-0-6
529649019	SED-48P2-6-12
529649020	SED-48P2-12-18
1204712322	529649001(SED-44P2-0-6) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2071378

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2071378

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649021	SED-47P2-0-6
529649022	SED-47P2-6-12
529649023	SED-59P2-0-6
529649024	SED-59P2-6-12
529649025	SED-58P2-0-6
529649026	SED-58P2-6-12
529649027	SED-57P2-0-6
529649028	SED-57P2-6-12
529649029	SED-57P2-12-18
1204712323	529649021(SED-47P2-0-6) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Liquid Scint Tc99, Soil

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2072846

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649001	SED-44P2-0-6
529649002	SED-44P2-6-12
529649003	SED-44P2-12-18
529649004	SED-43P2-0-6
529649005	SED-43P2-6-12
529649006	SED-46P2-0-6
529649007	SED-46P2-6-12
529649008	SED-45P2-0-6
529649009	SED-45P2-6-12
529649010	SED-19P2-0-6
1204715353	Method Blank (MB)
1204715354	529649001(SED-44P2-0-6) Sample Duplicate (DUP)
1204715355	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Recounts**

Sample 529649002 (SED-44P2-6-12) was recounted to verify sample results. The recount results are similar to the original results. Original results are reported.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2072847

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
529649011	SED-19P2-6-12
529649012	SED-19P2-12-18
529649013	SED-50P2-0-6
529649014	SED-50P2-6-12
529649015	SED-50P2-12-24
529649016	SED-49P2-0-6
529649017	SED-49P2-6-12
529649018	SED-48P2-0-6
529649019	SED-48P2-6-12
529649020	SED-48P2-12-18
529649021	SED-47P2-0-6
529649022	SED-47P2-6-12
1204715356	Method Blank (MB)
1204715357	529649015(SED-50P2-12-24) Sample Duplicate (DUP)
1204715358	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**RDL Met**

Sample (See Below) did not meet the detection limit due to the small sample aliquot used. The aliquot was

reduced due to the matrix of the sample. The sample was counted the maximum count time in order to achieve the lowest possible MDAs.

Sample	Analyte	Value
529649019 (SED-48P2-6-12)	Technetium-99	Result -0.665 < MDA 1.03 > RDL 1 pCi/g

### **Technical Information**

#### **Recounts**

Sample 529649011 (SED-19P2-6-12) was recounted to verify sample results. Recount is reported. Samples 1204715357 (SED-50P2-12-24DUP), 529649014 (SED-50P2-6-12) and 529649015 (SED-50P2-12-24) were recounted due to results more negative than the three sigma TPU. The second counts are reported.

### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.



Client Name: Westinghouse  
 Project/Site Name: CFFF RI Phase II  
 Address: 5801 Bluff Road Hopkins, SC 29061  
 Phone #: \_\_\_\_\_  
 Fax #: \_\_\_\_\_

Send Results To: joynerdp@westinghouse.com  
 Collected By: M. de Kozlowski

Sample ID <i>* For composites - indicate start and stop date/time</i>	Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (6) (Fill in the number of containers for each test)						Preservative Type (6)	Comments Note: extra sample is required for sample specific QC
						Radioactive (f) Yes, please supply isotopic info)	(7) Known or Possible Hazards		TC-99	Isotope U-235	Ammonia	Fluoride				
SED-19P2-6-12	12/2/20	1550	G	N	SD			1	X	X	X					
SED-19P2-12-18	12/2/20	1610	GFD	N	SD			2	X	X	X					
SED-50P2-0-6	12/3/20	1130	G	N	SD			1	X	X	X					
SED-50P2-6-12	12/3/20	1145	G	N	SD			1	X	X	X					
SED-50P2-12-24	12/3/20	1200	G MS200	N	SD			3	X	X	X					MS MSD
SED-49P2-0-6	12/3/20	1245	G	N	SD			1	X	X	X					
SED-49P2-6-12	12/3/20	1300	G	N	SD			1	X	X	X					
SED-48P2-0-6	12/3/20	1315	G	N	SD			1	X	X	X					
SED-48P2-6-12	12/3/20	1325	G	N	SD			1	X	X	X					
SED-48P2-12-18	12/3/20	1335	G	N	SD			1	X	X	X					

**Chain of Custody Signatures**

Relinquished By (Signed)	Date	Received by (signed)	Date	Time
<u>M. de Kozlowski</u>	12/4/20	<u>Charles K. Heston</u>	12/4/20	1200
<u>Charles K. Heston</u>	12/9/20	<u>R. Curran</u>	12/9/20	1011
<u>R. Curran</u>	12/5/20	<u>R. Curran</u>	12/9/20	1011
<u>R. Curran</u>	12/5/20	<u>R. Curran</u>	12/9/20	1011

TAT Requested: Normal:  X  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ (Subject to Surcharge)  
 Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks: **AECOM EDD**  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: 3 °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other: \_\_\_\_\_

1) Chain of Custody Number = Client Determined  
 Codes: N = Normal Sample, FB = Field Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3) Field Filtered. For liquid matrices, indicate with a Y - for yes the sample was field filtered or - N - for sample was not field filtered  
 4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, N=Nasal  
 5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1)  
 6) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, IX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 7) **KNOWN OR POSSIBLE HAZARDS**  
 Characteristic Hazards: FL = Flammable/Ignitable, LW = Listed Waste, RE = Reactive  
 RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Misc. RCRA metals, PCB = Polychlorinated biphenyls  
 TSCA Regulated: Pb = Lead  
 Other: OT = Other / Unknown (i.e. High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  
 Description: \_\_\_\_\_  
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

Phone # \_\_\_\_\_ Fax # \_\_\_\_\_  
 Project/Site Name: CFF RI Phase II  
 Address: 5801 Bluff Road Hopkins, SC 29061  
 Client Name: Westinghouse  
 GEL Work Order Number: \_\_\_\_\_  
 Sample Analysis Requested (6) (Fill in the number of containers for each test)

Sample ID <i>* For composites - indicate start and stop date/time</i>	Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered:		Total number of containers	Preservative Type (6)	Comments
						Yes, please supply isotopic info)	(7) Known or possible Hazards			
SED-47P2-0-6	12/13/20	1415	G	N	SD			1		Fluoride
SED-47P2-6-12	12/03/20	1400	G	N	SD			1		Ammonia
SED-59P2-0-6	12/03/20	1600	G	N	SD			1		Isotopic U-n
SED-59P2-6-12	12/03/20	1615	G	N	SD			1		
SED-58P2-0-6	12/04/20	0920	G	N	SD			1		
SED-58P2-6-12	12/04/20	0930	G	N	SD			1		
SED-57P2-0-6	12/04/20	1000	G	N	SD			1		
SED-57P2-6-12	12/04/20	1005	G	N	SD			1		
SED-57P2-12-18	12/04/20	1010	G	N	SD			1		

Relinquished By (Signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Received by (signed) \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 1. M. J. Kelly 12/14/20 1200  
 2. Charles R. Sublett 12/19/20 1011  
 3. P. C. Crew 12/19/20 1022  
 For sample shipping and delivery details, see Sample Receipt & Review form (SRR)  
 Chain of Custody Signatures

TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ (Subject to Surcharge)  
 Fax Results:  Yes  No  
 Select Deliverable:  C of A  QC Summary  Level 1  Level 2  Level 3  Level 4  
 Additional Remarks: AECOM EDD  
 For Lab Receiving Use Only: Custody Seal Intact?  Yes  No Cooler Temp: 3 °C  
 Sample Collection Time Zone:  Eastern  Pacific  Central  Mountain  Other: \_\_\_\_\_  
 1) Chain of Custody Number = Client Determined  
 2) Codes: N = Normal Sample, FB = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3) Field Filtered. For liquid matrices, indicate with a Y - for yes the sample was field filtered or - N - for sample was not field filtered  
 4) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, N=Nasal  
 5) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1)  
 6) Preservative Type: BA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 7) **KNOWN OR POSSIBLE HAZARDS**  
 Characteristic Hazards: FL = Flammable/Ignitable, CO = Corrosive, RE = Reactive  
 Listed Waste: LW = Listed Waste (F, K, P and U-listed wastes.)  
 Waste code(s): \_\_\_\_\_  
 RCRA Metals: As = Arsenic, Hg = Mercury, Ba = Barium, Se = Selenium, Cd = Cadmium, Ag = Silver, Cr = Chromium, MR = Misc. RCRA metals, PCB = Polychlorinated biphenyls  
 TSCA Regulated: \_\_\_\_\_  
 Description: \_\_\_\_\_  
 Other: OT = Other / Unknown (i.e. High/low pH, asbestos, beryllium, irritants, other misc. health hazards, etc.)  
 Please provide any additional details below regarding handling and/or disposal concerns. (i.e.: Origin of sample(s), type of site collected from, odd matrices, etc.)

IF SAMPLE RECEIPT & REVIEW FORM

Client: WNDC SDG/AR/COC/Work Order: 529649

Received By: AJA Date Received: 12/9/20

Carrier and Tracking Number

Circle Applicable:  
 FedEx Express FedEx Ground UPS Field Services Courier Other

Suspected Hazard Information  Yes  No \*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.

A) Shipped as a DOT Hazardous?  Hazard Class Shipped: \_\_\_\_\_ UN#: \_\_\_\_\_  
 If UN2910, Is the Radioactive Shipment Survey Compliant? Yes \_\_\_ No \_\_\_

B) Did the client designate the samples to be received as radioactive?  COC notation or radioactive stickers on containers equal client designation.

C) Did the RSO classify the samples as radioactive?  Maximum Net Counts Observed\* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr  
 Classified as: Rad 1 Rad 2 Rad 3

D) Did the client designate samples are hazardous?  COC notation or hazard labels on containers equal client designation.

E) Did the RSO identify possible hazards?  If D or E is yes, select Hazards below.  
 PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Client contacted and provided COC COC created upon receipt
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)*?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Preservation Method: <u>Wet Ice</u> Ice Packs Dry ice None Other: *all temperatures are recorded in Celsius TEMP: <u>3°</u>
4 Daily check performed and passed on IR temperature gun?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Temperature Device Serial #: <u>R4-16</u> Secondary Temperature Device Serial # (If Applicable):
5 Sample containers intact and sealed?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	If Yes, are Encores or Soil Kits present for solids? Yes ___ No ___ NA ___ (If yes, take to VOA Freezer)
				Do liquid VOA vials contain acid preservation? Yes ___ No ___ NA ___ (If unknown, select No)
				Are liquid VOA vials free of headspace? Yes ___ No ___ NA ___ Sample ID's and containers affected:
8 Samples received within holding time?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No dates on containers No times on containers COC missing info Other (describe)
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: No container count on COC Other (describe)
12 Are sample containers identifiable as GEL provided by use of GEL labels?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
13 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Circle Applicable: Not relinquished Other (describe)

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials NPL Date 12/10/20 Page 1 of 1



**List of current GEL Certifications as of 05 January 2021**

<b>State</b>	<b>Certification</b>
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-20-17
Utah NELAP	SC000122020-33
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



March 19, 2021

Ms. Cynthia Teague  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Sediment and GW Campaign  
Work Order: 537343

Dear Ms. Teague:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 10, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

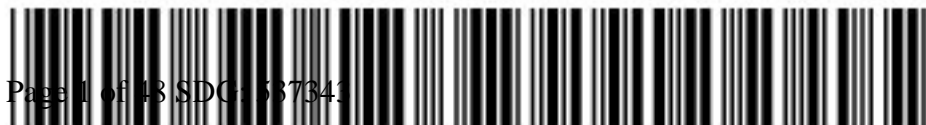
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4443.

Sincerely,

Lindsay Fabra  
Project Manager

Purchase Order: PO 4500778461  
Enclosures



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

## Certificate of Analysis Report for

WNUC009 Westinghouse Electric Co, LLC (4500778461)

Client SDG: 537343 GEL Work Order: 537343

**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
- H Analytical holding time was exceeded
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Lindsay Fabra.

Reviewed by \_\_\_\_\_

*Lindsay Fabra*

## Analytical Detections Summary

<b>SDG/Report#</b>	537343	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q	
537343001	SED-68-0-6	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	1.02 pCi/g		
			3966-29-5				
		7440-61-1	Uranium-238	1.45 pCi/g			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	84.7 mg/kg		
			16984-48-8	Fluoride	4.43 mg/kg		
537343002	SED-68-6-12	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	1.26 pCi/g		
			3966-29-5				
		7440-61-1	Uranium-238	1.08 pCi/g			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	89.1 mg/kg		
			16984-48-8	Fluoride	4.46 mg/kg		
537343003	SED-68-12-24	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	1.23 pCi/g		
			3966-29-5				
		7440-61-1	Uranium-238	0.615 pCi/g			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	80.9 mg/kg		
			16984-48-8	Fluoride	4.53 mg/kg		
537343004	SED-68-12-24 DUP	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	1.3 pCi/g		
			3966-29-5				
		7440-61-1	Uranium-238	0.955 pCi/g			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	72.2 mg/kg		
			16984-48-8	Fluoride	4.66 mg/kg		
537343005	SED-67-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.83 pCi/g		
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	14.8 pCi/g		
			3966-29-5				
				15117-96-1/1	Uranium-235/236	0.743 pCi/g	
				3982-70-2			
		7440-61-1	Uranium-238	4.41 pCi/g			
EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	623 mg/kg				
	16984-48-8	Fluoride	30.4 mg/kg				
537343006	SED-67-6-12	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	2.78 pCi/g		
			3966-29-5				
		7440-61-1	Uranium-238	1.39 pCi/g			
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	611 mg/kg		
			16984-48-8	Fluoride	10.5 mg/kg		
537343007	SED-67-12-24	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	2.57 pCi/g		
			3966-29-5				
				15117-96-1/1	Uranium-235/236	0.155 pCi/g	
				3982-70-2			
				7440-61-1	Uranium-238	1.6 pCi/g	
		EPA 350.1 Modified SC SW846 9056A	7664-41-7	Nitrogen, Ammonia	518 mg/kg		
			16984-48-8	Fluoride	9.43 mg/kg		
537343008	SED-66-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	2.16 pCi/g		
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	14.5 pCi/g		
			3966-29-5				
		15117-96-1/1	Uranium-235/236	0.637 pCi/g			
		3982-70-2					

## Analytical Detections Summary

<b>SDG/Report#</b>	537343	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
537343008	SED-66-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	4.19 pCi/g	
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	785 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	20.9 mg/kg	
537343009	SED-66-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	0.77 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	4.75 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	0.265 pCi/g	
			3982-70-2			
537343010	SED-66-12-24	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	2.46 pCi/g	
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	563 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	10.4 mg/kg	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	1.52 pCi/g	
			3966-29-5			
537343011	SED-B7-0-6	DOE EML HASL-300, U-02-RC Modified	15117-96-1/1	Uranium-235/236	0.156 pCi/g	
			3982-70-2			
			7440-61-1	Uranium-238	1.19 pCi/g	
		EPA 350.1 Modified SC	7664-41-7	Nitrogen, Ammonia	745 mg/kg	
		SW846 9056A	16984-48-8	Fluoride	4.21 mg/kg	
537343012	SED-B7-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	3.71 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	24.7 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	1.13 pCi/g	
			3982-70-2			
537343013	SED-B8-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	6.32 pCi/g	
		DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	0.937 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	43.7 pCi/g	
			3966-29-5			
			15117-96-1/1	Uranium-235/236	1.92 pCi/g	
537343014	SED-B8-6-12	DOE EML HASL-300, U-02-RC Modified	3982-70-2			
		DOE EML HASL-300, Tc-02-RC Modified	7440-61-1	Uranium-238	11.0 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	14133-76-7	Technetium-99	1.4 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	37.6 pCi/g	
			3966-29-5			
537343015	SED-B3-0-6	DOE EML HASL-300, U-02-RC Modified	15117-96-1/1	Uranium-235/236	1.92 pCi/g	
			3982-70-2			
			7440-61-1	Uranium-238	8.65 pCi/g	
		DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	4.37 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1	Uranium-233/234	47.2 pCi/g	
	3966-29-5					
	15117-96-1/1	Uranium-235/236	2.56 pCi/g			
	3982-70-2					

## Analytical Detections Summary

<b>SDG/Report#</b>	537343	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Sediment and GW Campaign		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
537343015	SED-B3-0-6	DOE EML HASL-300, U-02-RC Modified	7440-61-1	Uranium-238	13.1 pCi/g	
537343016	SED-B3-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	5.34 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	90.6 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	4.75 pCi/g	
			7440-61-1	Uranium-238	22.1 pCi/g	
537343017	SED-B4-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.05 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	33.6 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	2.25 pCi/g	
			7440-61-1	Uranium-238	7.78 pCi/g	
537343018	SED-B4-6-12	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	10.4 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	0.384 pCi/g	
			7440-61-1	Uranium-238	3.49 pCi/g	

**NOTE:** This report only lists detections greater than the reporting level. Reporting level is the LOQ, PQL, MDC, or Client-provided limit.

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-68-0-6	Project:	WNUC01320
Sample ID:	537343001	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	08-MAR-21 13:45		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	28%		

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.43	0.468	1.38	mg/kg	9.93	1	LXA2	03/10/21	2259	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		84.7	1.06	2.94	mg/kg	42.4	1	AXH3	03/17/21	0942	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-68-6-12	Project:	WNUC01320
Sample ID:	537343002	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	08-MAR-21 14:30		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	26.3%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.46	0.465	1.37	mg/kg	10.1	1	LXA2	03/10/21	2328	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		89.1	1.03	2.87	mg/kg	42.4	1	AXH3	03/17/21	0943	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-68-12-24	Project:	WNUC01320
Sample ID:	537343003	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	08-MAR-21 14:45		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	26.8%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.53	0.454	1.34	mg/kg	9.78	1	LXA2	03/10/21	2358	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		80.9	1.08	2.99	mg/kg	43.9	1	AXH3	03/17/21	0943	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-68-12-24 DUP Project: WNUC01320  
Sample ID: 537343004 Client ID: WNUC009  
Matrix: Solid  
Collect Date: 08-MAR-21 14:45  
Receive Date: 10-MAR-21  
Collector: Client  
Moisture: 24.9%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.66	0.446	1.31	mg/kg	9.85	1	LXA2	03/11/21	0028	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		72.2	1.25	3.47	mg/kg	52.1	1	AXH3	03/17/21	0948	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor                      Lc/LC: Critical Level  
DL: Detection Limit                      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-67-0-6	Project:	WNUC01320
Sample ID:	537343005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	08-MAR-21 16:20		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	86.5%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		30.4	2.46	7.25	mg/kg	9.76	1	LXA2	03/11/21	0058	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		623	6.97	19.4	mg/kg	52.1	1	AXH3	03/17/21	0949	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-67-6-12	Project:	WNUC01320
Sample ID:	537343006	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	08-MAR-21 16:30		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	70.4%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		10.5	1.12	3.28	mg/kg	9.71	1	LXA2	03/11/21	0128	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		611	14.6	40.6	mg/kg	48.1	5	AXH3	03/17/21	0956	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-67-12-24 Project: WNUC01320  
Sample ID: 537343007 Client ID: WNUC009  
Matrix: Solid  
Collect Date: 08-MAR-21 16:45  
Receive Date: 10-MAR-21  
Collector: Client  
Moisture: 71.8%

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		9.43	1.21	3.55	mg/kg	10.0	1	LXA2	03/11/21	0158	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		518	17.0	47.2	mg/kg	53.2	5	AXH3	03/17/21	1001	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor                      Lc/LC: Critical Level  
DL: Detection Limit                      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-66-0-6	Project:	WNUC01320
Sample ID:	537343008	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-MAR-21 11:45		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	63.3%		

---

Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		20.9	0.924	2.72	mg/kg	9.98	1	LXA2	03/11/21	0227	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		785	10.4	28.8	mg/kg	42.4	5	AXH3	03/17/21	1002	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-66-6-12	Project:	WNUC01320
Sample ID:	537343009	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-MAR-21 12:00		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	49%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		10.4	0.668	1.96	mg/kg	10.0	1	LXA2	03/11/21	0357	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		563	6.30	17.5	mg/kg	35.7	5	AXH3	03/17/21	1003	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	SW846 9056A	
2	EPA 350.1 Modified SC	

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

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Client Sample ID:	SED-66-12-24	Project:	WNUC01320
Sample ID:	537343010	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	09-MAR-21 12:15		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	51.7%		

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Parameter	Qualifier	Result	DL	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Ion Chromatography												
SW846 9056A Fluoride "Dry Weight Corrected"												
Fluoride		4.21	0.685	2.02	mg/kg	9.73	1	LXA2	03/11/21	0427	2101564	1
Nutrient Analysis												
EPA 350.1 Nitrogen, Ammonia "Dry Weight Corrected"												
Nitrogen, Ammonia		745	8.03	22.3	mg/kg	43.1	5	AXH3	03/17/21	1004	2101699	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
EPA 350.1 Modified Prep	EPA 350.1 Mod. Ammonia Nitrogen Prep	AXH3	03/16/21	1026	2101698
SW846 9056A	SW846 9056A Total Anions in Soil	SH3	03/10/21	1911	2101563

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	SW846 9056A		
2	EPA 350.1 Modified SC		

### Notes:

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-68-0-6	Project: WNUC01320
Sample ID: 537343001	Client ID: WNUC009
Matrix: Solid	
Collect Date: 08-MAR-21 13:45	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 28%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.02	+/-0.353	0.267	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236	U	0.0106	+/-0.101	0.208	0.500	pCi/g							
Uranium-238		1.45	+/-0.403	0.193	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.0815	+/-0.400	0.694	1.00	pCi/g			JJ3	03/16/21	1128	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			104	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-68-6-12	Project: WNUC01320
Sample ID: 537343002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 08-MAR-21 14:30	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 26.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.26	+/-0.401	0.288	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236	U	0.0732	+/-0.125	0.110	0.500	pCi/g							
Uranium-238		1.08	+/-0.364	0.226	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	-0.313	+/-0.379	0.690	1.00	pCi/g			JJ3	03/16/21	1220	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			114	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-68-12-24	Project: WNUC01320
Sample ID: 537343003	Client ID: WNUC009
Matrix: Solid	
Collect Date: 08-MAR-21 14:45	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 26.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.23	+/-0.429	0.291	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236	U	0.0471	+/-0.155	0.284	0.500	pCi/g							
Uranium-238		0.615	+/-0.313	0.270	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.0594	+/-0.399	0.694	1.00	pCi/g			JJ3	03/16/21	1313	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.3	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-68-12-24 DUP	Project: WNUC01320
Sample ID: 537343004	Client ID: WNUC009
Matrix: Solid	
Collect Date: 08-MAR-21 14:45	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 24.9%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.30	+/-0.429	0.310	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236	U	0.0530	+/-0.142	0.245	0.500	pCi/g							
Uranium-238		0.955	+/-0.366	0.261	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.156	+/-0.399	0.687	1.00	pCi/g			JJ3	03/16/21	1405	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			100	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.8	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID:	SED-67-0-6	Project:	WNUC01320
Sample ID:	537343005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	08-MAR-21 16:20		
Receive Date:	10-MAR-21		
Collector:	Client		
Moisture:	86.5%		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		14.8	+/-1.32	0.316	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		0.743	+/-0.339	0.179	0.500	pCi/g							
Uranium-238		4.41	+/-0.727	0.251	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.83	+/-0.428	0.612	1.00	pCi/g			JJ3	03/16/21	1458	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			92.5	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			86.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Report Date: March 19, 2021

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-67-6-12	Project: WNUC01320
Sample ID: 537343006	Client ID: WNUC009
Matrix: Solid	
Collect Date: 08-MAR-21 16:30	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 70.4%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.78	+/-0.621	0.287	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236	U	0.118	+/-0.169	0.203	0.500	pCi/g							
Uranium-238		1.39	+/-0.445	0.263	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.639	+/-0.413	0.673	1.00	pCi/g			JJ3	03/16/21	1550	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			98	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			78.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-67-12-24	Project: WNUC01320
Sample ID: 537343007	Client ID: WNUC009
Matrix: Solid	
Collect Date: 08-MAR-21 16:45	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 71.8%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		2.57	+/-0.668	0.407	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		0.155	+/-0.204	0.155	0.500	pCi/g							
Uranium-238		1.60	+/-0.519	0.252	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.461	+/-0.394	0.653	1.00	pCi/g			JJ3	03/16/21	1643	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			88.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-66-0-6	Project: WNUC01320
Sample ID: 537343008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 11:45	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 63.3%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		14.5	+/-1.31	0.280	0.500	pCi/g		MP2		03/19/21	0916	2101870	1
Uranium-235/236		0.637	+/-0.312	0.112	0.500	pCi/g							
Uranium-238		4.19	+/-0.704	0.197	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		2.16	+/-0.469	0.659	1.00	pCi/g		JJ3		03/16/21	1735	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			91.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			78.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-66-6-12	Project: WNUC01320
Sample ID: 537343009	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 12:00	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 49%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		4.75	+/-0.769	0.256	0.500	pCi/g		MP2		03/19/21	0916	2101870	1
Uranium-235/236		0.265	+/-0.219	0.186	0.500	pCi/g							
Uranium-238		2.46	+/-0.557	0.231	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		0.770	+/-0.447	0.721	1.00	pCi/g		JJ3		03/16/21	1828	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			87.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			70.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-66-12-24	Project: WNUC01320
Sample ID: 537343010	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 12:15	
Receive Date: 10-MAR-21	
Collector: Client	
Moisture: 51.7%	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		1.52	+/-0.449	0.291	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		0.156	+/-0.172	0.117	0.500	pCi/g							
Uranium-238		1.19	+/-0.388	0.173	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.184	+/-0.399	0.684	1.00	pCi/g			JJ3	03/16/21	1920	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			94.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-B7-0-6	Project: WNUC01320
Sample ID: 537343011	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 13:55	
Receive Date: 10-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		24.7	+/-1.74	0.284	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		1.13	+/-0.431	0.272	0.500	pCi/g							
Uranium-238		6.32	+/-0.887	0.272	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		3.71	+/-0.533	0.673	1.00	pCi/g			JJ3	03/16/21	2013	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			90.3	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			76.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-B7-6-12      Project: WNUC01320  
Sample ID: 537343012      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 09-MAR-21 14:00  
Receive Date: 10-MAR-21  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis													
Alphaspec U, "Dry Weight Corrected"													
Uranium-233/234		5.49	+/-0.863	0.343	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		0.275	+/-0.236	0.231	0.500	pCi/g							
Uranium-238		3.16	+/-0.652	0.236	0.500	pCi/g							
Rad Liquid Scintillation Analysis													
Liquid Scint Tc99, Soil "As Received"													
Technetium-99	U	0.472	+/-0.398	0.660	1.00	pCi/g			JJ3	03/16/21	2105	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			87.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			74.6	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-B8-6-12	Project: WNUC01320
Sample ID: 537343014	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 14:45	
Receive Date: 10-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		37.6	+/-2.43	0.296	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		1.92	+/-0.627	0.328	0.500	pCi/g							
Uranium-238		8.65	+/-1.17	0.246	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.40	+/-0.398	0.589	1.00	pCi/g			JJ3	03/16/21	2250	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			68.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			87.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-B3-0-6	Project: WNUC01320
Sample ID: 537343015	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 16:20	
Receive Date: 10-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		47.2	+/-2.51	0.253	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		2.56	+/-0.662	0.297	0.500	pCi/g							
Uranium-238		13.1	+/-1.32	0.209	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		4.37	+/-0.533	0.637	1.00	pCi/g			JJ3	03/16/21	2343	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE EML HASL-300, U-02-RC Modified		
2	DOE EML HASL-300, Tc-02-RC Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			72.2	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-B3-6-12	Project: WNUC01320
Sample ID: 537343016	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 16:30	
Receive Date: 10-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		90.6	+/-3.21	0.264	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		4.75	+/-0.819	0.110	0.500	pCi/g							
Uranium-238		22.1	+/-1.59	0.216	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		5.34	+/-0.588	0.679	1.00	pCi/g			JJ3	03/17/21	0035	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			84	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			77.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit



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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-B4-0-6      Project: WNUC01320  
Sample ID: 537343017      Client ID: WNUC009  
Matrix: Solid  
Collect Date: 09-MAR-21 16:40  
Receive Date: 10-MAR-21  
Collector: Client

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		33.6	+/-2.15	0.312	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		2.25	+/-0.625	0.133	0.500	pCi/g							
Uranium-238		7.78	+/-1.04	0.261	0.500	pCi/g							
<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99		1.05	+/-0.373	0.571	1.00	pCi/g			JJ3	03/17/21	0128	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			70.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			88.3	(15%-125%)

### Notes:

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor      Lc/LC: Critical Level  
DL: Detection Limit      PF: Prep Factor  
MDA: Minimum Detectable Activity      RL: Reporting Limit  
MDC: Minimum Detectable Concentration      SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 19, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Sediment and GW Campaign

Client Sample ID: SED-B4-6-12	Project: WNUC01320
Sample ID: 537343018	Client ID: WNUC009
Matrix: Solid	
Collect Date: 09-MAR-21 16:50	
Receive Date: 10-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, "Dry Weight Corrected"</b>													
Uranium-233/234		10.4	+/-1.19	0.330	0.500	pCi/g			MP2	03/19/21	0916	2101870	1
Uranium-235/236		0.384	+/-0.287	0.301	0.500	pCi/g							
Uranium-238		3.49	+/-0.697	0.269	0.500	pCi/g							

<b>Rad Liquid Scintillation Analysis</b>													
<b>Liquid Scint Tc99, Soil "As Received"</b>													
Technetium-99	U	0.383	+/-0.417	0.700	1.00	pCi/g			JJ3	03/17/21	0335	2101574	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	03/11/21	1025	2101557

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, "Dry Weight Corrected"			82.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			74.9	(15%-125%)

**Notes:**  
Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: March 19, 2021

Page 1 of 2

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 537343

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2101564										
QC1204770809	537343010	DUP									
Fluoride		4.21		3.69	mg/kg	13.3 ^		(+/-2.05)	LXA2	03/11/21	04:57
QC1204770808	LCS										
Fluoride	24.6			25.0	mg/kg		102	(90%-110%)		03/10/21	22:29
QC1204770807	MB										
Fluoride			U	ND	mg/kg					03/10/21	21:59
QC1204770810	537343010	MS									
Fluoride	50.5	4.21		19.1	mg/kg		29.4*	(75%-125%)		03/11/21	05:26
<b>Nutrient Analysis</b>											
Batch	2101699										
QC1204771127	537343010	DUP									
Nitrogen, Ammonia		745		652	mg/kg	13.4		(0%-20%)	AXH3	03/17/21	10:05
QC1204771126	LCS										
Nitrogen, Ammonia	50.0			50.5	mg/kg		101	(90%-110%)		03/17/21	09:41
QC1204771125	MB										
Nitrogen, Ammonia			U	ND	mg/kg					03/17/21	09:40
QC1204771128	537343010	MS									
Nitrogen, Ammonia	83.5	745	H	793	mg/kg		N/A	(90%-110%)		03/17/21	10:28

### Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- B The target analyte was detected in the associated blank.

# GEL LABORATORIES LLC

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## QC Summary

Workorder: 537343

Page 2 of 2

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range										
H	Analytical holding time was exceeded										
J	See case narrative for an explanation										
J	Value is estimated										
N/A	RPD or %Recovery limits do not apply.										
N1	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
e	5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: March 19, 2021

Page 1 of 3

Westinghouse Electric Company, LLC

PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 537343

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Ion Chromatography</b>											
Batch	2101564										
QC1204770809	537343010	DUP									
Fluoride		4.21		3.69	mg/kg	13.3 ^		(+/-2.05)	LXA2	03/11/21	04:57
QC1204770808	LCS										
Fluoride	24.6			25.0	mg/kg		102	(90%-110%)		03/10/21	22:29
QC1204770807	MB										
Fluoride			U	0.000	mg/kg					03/10/21	21:59
QC1204770810	537343010	MS									
Fluoride	50.5	4.21		19.1	mg/kg		29.4*	(75%-125%)		03/11/21	05:26
<b>Nutrient Analysis</b>											
Batch	2101699										
QC1204771127	537343010	DUP									
Nitrogen, Ammonia		745		652	mg/kg	13.4		(0%-20%)	AXH3	03/17/21	10:05
QC1204771126	LCS										
Nitrogen, Ammonia	50.0			50.5	mg/kg		101	(90%-110%)		03/17/21	09:41
QC1204771125	MB										
Nitrogen, Ammonia			U	0.492	mg/kg					03/17/21	09:40
QC1204771128	537343010	MS									
Nitrogen, Ammonia	83.5	745	H	793	mg/kg		N/A	(90%-110%)		03/17/21	10:28
<b>Rad Alpha Spec</b>											
Batch	2101870										
QC1204771489	537343010	DUP									
Uranium-233/234		1.52		1.41	pCi/g	7.06		(0%-20%)	MP2	03/19/21	09:16

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 537343

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	2101870										
Uranium-235/236		0.156	U	0.0554	pCi/g	49		(0% - 100%)	MP2	03/19/21	09:16
Uranium-238		1.19		1.67	pCi/g	34*		(0%-20%)			
QC1204771490	LCS										
Uranium-233/234				11.0	pCi/g					03/19/21	09:16
Uranium-235/236				0.791	pCi/g						
Uranium-238	10.8			11.8	pCi/g		109	(75%-125%)			
QC1204771488	MB										
Uranium-233/234			U	0.0724	pCi/g					03/19/21	09:16
Uranium-235/236			U	0.0219	pCi/g						
Uranium-238			U	-0.0322	pCi/g						
<b>Rad Liquid Scintillation</b>											
Batch	2101574										
QC1204770848	537343010	DUP									
Technetium-99		U	0.184	U	-0.249	pCi/g	N/A		N/A	JJ3	03/17/21 05:20
QC1204770849	LCS										
Technetium-99	32.5			35.9	pCi/g		110	(75%-125%)		03/17/21	06:13
QC1204770847	MB										
Technetium-99			U	-0.138	pCi/g					03/17/21	04:28

**Notes:**

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 537343

Page 3 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>	Result is greater than value reported										
B	The target analyte was detected in the associated blank.										
BD	Results are either below the MDC or tracer recovery is low										
E	General Chemistry--Concentration of the target analyte exceeds the instrument calibration range										
FA	Failed analysis.										
H	Analytical holding time was exceeded										
J	See case narrative for an explanation										
J	Value is estimated										
K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.										
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.										
M	M if above MDC and less than LLD										
M	REMP Result > MDC/CL and < RDL										
N/A	RPD or %Recovery limits do not apply.										
NI	See case narrative										
ND	Analyte concentration is not detected above the detection limit										
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier										
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.										
R	Per section 9.3.4.1 of Method 1664 Revision B, due to matrix spike recovery issues, this result may not be reported or used for regulatory compliance purposes.										
R	Sample results are rejected										
U	Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.										
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.										
Z	Paint Filter Test--Particulates passed through the filter, however no free liquids were observed.										
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.										
d	5-day BOD--The 2:1 depletion requirement was not met for this sample										
e	5-day BOD--Test replicates show more than 30% difference between high and low values. The data is qualified per the method and can be used for reporting purposes										
h	Preparation or preservation holding time was exceeded										

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

\* Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 537343**

## **General Chemistry**

**Product:** Ion Chromatography

**Analytical Method:** SW846 9056A

**Analytical Procedure:** GL-GC-E-086 REV# 29

**Analytical Batches:** 2101564 and 2101563

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537343001	SED-68-0-6
537343002	SED-68-6-12
537343003	SED-68-12-24
537343004	SED-68-12-24 DUP
537343005	SED-67-0-6
537343006	SED-67-6-12
537343007	SED-67-12-24
537343008	SED-66-0-6
537343009	SED-66-6-12
537343010	SED-66-12-24
1204770807	Method Blank (MB)
1204770808	Laboratory Control Sample (LCS)
1204770809	537343010(SED-66-12-24) Sample Duplicate (DUP)
1204770810	537343010(SED-66-12-24) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Quality Control (QC) Information**

#### **Matrix Spike (MS)/Post Spike (PS) Recovery Statement**

The percent recoveries (%R) obtained from the spike analyses are evaluated when the sample concentration is less than four times (4X) the spike concentration added. The matrix spike recovered outside of the established acceptance limits due to matrix interference and/or non-homogeneity.

<b>Analyte</b>	<b>Sample</b>	<b>Value</b>
Fluoride	1204770810 (SED-66-12-24MS)	29.4* (75%-125%)

**Product:** Ammonia Nitrogen



**Analytical Method:** EPA 350.1 Modified SC  
**Analytical Procedure:** GL-GC-E-106 REV# 10  
**Analytical Batch:** 2101699

**Preparation Method:** EPA 350.1 Modified Prep  
**Preparation Procedure:** GL-GC-E-072 REV# 18  
**Preparation Batch:** 2101698

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537343001	SED-68-0-6
537343002	SED-68-6-12
537343003	SED-68-12-24
537343004	SED-68-12-24 DUP
537343005	SED-67-0-6
537343006	SED-67-6-12
537343007	SED-67-12-24
537343008	SED-66-0-6
537343009	SED-66-6-12
537343010	SED-66-12-24
1204771125	Method Blank (MB)
1204771126	Laboratory Control Sample (LCS)
1204771127	537343010(SED-66-12-24) Sample Duplicate (DUP)
1204771128	537343010(SED-66-12-24) Matrix Spike (MS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Technical Information**

**Sample Dilutions**

The following samples 1204771127 (SED-66-12-24DUP), 1204771128 (SED-66-12-24MS), 537343006 (SED-67-6-12), 537343007 (SED-67-12-24), 537343008 (SED-66-0-6), 537343009 (SED-66-6-12) and 537343010 (SED-66-12-24) were diluted because target analyte concentrations exceeded the calibration range. Dilutions may be required for many reasons, including to minimize matrix interferences or to bring over range target analyte concentrations into the linear calibration range.

Analyte	537343				
	006	007	008	009	010
Nitrogen, Ammonia	5X	5X	5X	5X	5X

**Sample Re-analysis**

Sample 1204771128 (SED-66-12-24MS) was re-analyzed due to instrument failure. The results from the reanalysis are reported.

**Radiochemistry**

**Product:** Alphaspec U,  
**Analytical Method:** DOE EML HASL-300, U-02-RC Modified  
**Analytical Procedure:** GL-RAD-A-011 REV# 28  
**Analytical Batch:** 2101870

**Preparation Method:** Dry Soil Prep  
**Preparation Procedure:** GL-RAD-A-021 REV# 24  
**Preparation Batch:** 2101557

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537343001	SED-68-0-6
537343002	SED-68-6-12
537343003	SED-68-12-24
537343004	SED-68-12-24 DUP
537343005	SED-67-0-6
537343006	SED-67-6-12
537343007	SED-67-12-24
537343008	SED-66-0-6
537343009	SED-66-6-12
537343010	SED-66-12-24
537343011	SED-B7-0-6
537343012	SED-B7-6-12
537343013	SED-B8-0-6
537343014	SED-B8-6-12
537343015	SED-B3-0-6
537343016	SED-B3-6-12
537343017	SED-B4-0-6
537343018	SED-B4-6-12
1204771488	Method Blank (MB)
1204771489	537343010(SED-66-12-24) Sample Duplicate (DUP)
1204771490	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

**Quality Control (QC) Information**

**Duplication Criteria between QC Sample and Duplicate Sample**

The Sample and the Duplicate, (See Below), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with the value listed below.

<b>Sample</b>	<b>Analyte</b>	<b>Value</b>
1204771489 (SED-66-12-24DUP)	Uranium-238	RPD 34* (0.00%-20.00%) RER 1.4 (0-3)

**Miscellaneous Information**

**Additional Comments**

Samples 537343006 (SED-67-6-12) and 537343017 (SED-B4-0-6) did not meet the resolution requirement of having a full width half maximum of 100 keV or less for the tracer; however, the tracer yield requirement was met and the tracer peaks are within the tracer region of interest.

**Product: Dry Weight**

**Preparation Method:** ASTM D 2216 (Modified)

**Preparation Procedure:** GL-OA-E-020 REV# 13

**Preparation Batch:** 2101557

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2101557

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537343001	SED-68-0-6
537343002	SED-68-6-12
537343003	SED-68-12-24
537343004	SED-68-12-24 DUP
537343005	SED-67-0-6
537343006	SED-67-6-12
537343007	SED-67-12-24
537343008	SED-66-0-6
537343009	SED-66-6-12
537343010	SED-66-12-24
537343011	SED-B7-0-6
537343012	SED-B7-6-12
537343013	SED-B8-0-6
537343014	SED-B8-6-12
537343015	SED-B3-0-6
537343016	SED-B3-6-12
537343017	SED-B4-0-6
537343018	SED-B4-6-12
1204770804	537342001(NonSDG) Sample Duplicate (DUP)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product: Liquid Scint Tc99, Soil**

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2101574

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537343001	SED-68-0-6
537343002	SED-68-6-12
537343003	SED-68-12-24
537343004	SED-68-12-24 DUP
537343005	SED-67-0-6
537343006	SED-67-6-12
537343007	SED-67-12-24
537343008	SED-66-0-6
537343009	SED-66-6-12
537343010	SED-66-12-24
537343011	SED-B7-0-6
537343012	SED-B7-6-12
537343013	SED-B8-0-6
537343014	SED-B8-6-12
537343015	SED-B3-0-6
537343016	SED-B3-6-12
537343017	SED-B4-0-6
537343018	SED-B4-6-12
1204770847	Method Blank (MB)
1204770848	537343010(SED-66-12-24) Sample Duplicate (DUP)
1204770849	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

# GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

537343

GEL Work Order Number:

Client Name: Wasting horse Phone #: \_\_\_\_\_  
 Project/Site Name: Wasting horse RI Phase II Fax #: \_\_\_\_\_  
 Address: 5801 Bluff Road Hopkins, SC 29061  
 Collected by: S. Becker / G. Moore Send Results To: joyned@wastinghorse.com

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID <small>* For composites - indicate start and stop date/time</small>	Date Collected (mm-dd-yy)	Time Collected (Military) (hhmm)	QC Code (1)	Field Filtered (2)	Sample Matrix (3)	Should this sample be considered:		Total number of containers	Sample Analysis Requested (5)				Preservative Type (6)	Comments
						Radioactive	TSCA Regulated		1	2	3	4		
SED-68-0-6	03-08-21	1345	G	N	SD			1	X	X	X	X		
SED-68-6-12		1430	G	N	SD			1	X	X	X	X		
SED-68-12-24		1445	G	N	SD			1	X	X	X	X		
SED-68-12-24-DUP		1445	G	N	SP			1	X	X	X	X		
SED-67-0-6		1620	G	N	SD			1	X	X	X	X		
SED-67-6-12		1630	G	N	SD			1	X	X	X	X		
SED-67-12-24		1645	G	N	SD			1	X	X	X	X		
SED-66-0-6	3-09-21	1145	G	N	SD			1	X	X	X	X		
SED-66-6-12		1200	G	N	SD			1	X	X	X	X		
SED-66-12-24		1215	G	N	SS			1	X	X	X	X		

TAT Requested: Normal:  Rush: \_\_\_\_\_ Specify: \_\_\_\_\_ (Subject to Surcharge) Fax Results: Yes / No  
 Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4

Chain of Custody Signatures		Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Received by (signed)	Date
<u>S. Becker</u>	<u>3/9/21 1710</u>	<u>Secured Location</u>	<u>3/9/2021 1710</u>
<u>24</u>	<u>3-10-21 1102</u>		
<u>3/10/21</u>	<u>3:10:21 1550</u>		

Method of Shipment: \_\_\_\_\_ Date Shipped: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_

GEL PM: \_\_\_\_\_

For Lab Receiving Use Only  
 Custody Seal Intact? YES / NO  
 Cooler Temp: Y / C

1.) Chain of Custody Number - Client Designated  
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Faecal, N=Nasal  
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 WHITE = LABORATORY      YELLOW = FILE      PINK = CLIENT









**List of current GEL Certifications as of 19 March 2021**

<b>State</b>	<b>Certification</b>
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122020-34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780



March 23, 2021

Ms. Cynthia Teague  
Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina 29205

Re: Displaced RI Work Plan  
Work Order: 537660

Dear Ms. Teague:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on March 12, 2021. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

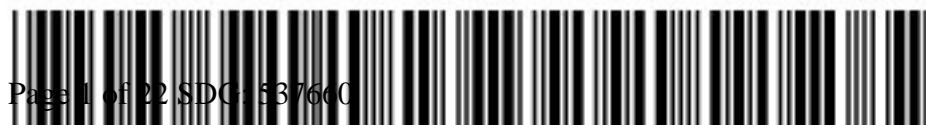
Test results for NELAP or ISO 17025 accredited tests are verified to meet the requirements of those standards, with any exceptions noted. The results reported relate only to the items tested and to the sample as received by the laboratory. These results may not be reproduced except as full reports without approval by the laboratory. Copies of GEL's accreditations and certifications can be found on our website at [www.gel.com](http://www.gel.com).

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4443.

Sincerely,

Samuel Hogan for  
Lindsay Fabra  
Project Manager

Purchase Order: PO 4500778461  
Enclosures



**GEL LABORATORIES LLC**

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

**Certificate of Analysis Report  
for**

WNUC009 Westinghouse Electric Co, LLC (4500778461)

Client SDG: 537660 GEL Work Order: 537660

**The Qualifiers in this report are defined as follows:**

- \* A quality control analyte recovery is outside of specified acceptance criteria
- \*\* Analyte is a Tracer compound
- \*\* Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

This data report has been prepared and reviewed in accordance with GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Lindsay Fabra.



Reviewed by \_\_\_\_\_



## Analytical Detections Summary

<b>SDG/Report#</b>	537660	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Displaced RI Work Plan		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
537660001	SED-B1-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	23.7 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	401 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	26.9 pCi/g	
			7440-61-1	Uranium-238	95.7 pCi/g	
537660002	SED-B1-6-12	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	3.15 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	0.315 pCi/g	
			7440-61-1	Uranium-238	2.01 pCi/g	
537660003	SED-B5-0-6	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	30.0 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	1.36 pCi/g	
			7440-61-1	Uranium-238	7.25 pCi/g	
537660004	SED-B5-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.4 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	4.43 pCi/g	
			7440-61-1	Uranium-238	2.29 pCi/g	
537660005	SED-B2-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	19.1 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	267 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	15.8 pCi/g	
			7440-61-1	Uranium-238	60.3 pCi/g	
537660006	SED-B2-6-12	DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	5.45 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	0.405 pCi/g	
			7440-61-1	Uranium-238	2.3 pCi/g	
537660007	SED-B6-0-6	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.13 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	30.4 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	1.82 pCi/g	
			7440-61-1	Uranium-238	6.94 pCi/g	
537660008	SED-B6-6-12	DOE EML HASL-300, Tc-02-RC Modified	14133-76-7	Technetium-99	1.36 pCi/g	
		DOE EML HASL-300, U-02-RC Modified	13968-55-3/1 3966-29-5	Uranium-233/234	7.98 pCi/g	
			15117-96-1/1 3982-70-2	Uranium-235/236	0.447 pCi/g	
			7440-61-1	Uranium-238	2.89 pCi/g	



## Analytical Detections Summary

<b>SDG/Report#</b>	537660	<b>Client</b>	Westinghouse Electric Co, LLC (4500778461)
<b>Project ID</b>	Displaced RI Work Plan		

GEL ID	Client Sample ID	Method	CAS	Analyte	Result	Q
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**NOTE:** This report only lists detections greater than the reporting level. Reporting level is the LOQ, PQL, MDC, or Client-provided limit.



# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 23, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Displaced RI Work Plan

Client Sample ID: SED-B1-6-12	Project: WNUC01420
Sample ID: 537660002	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-MAR-21 10:10	
Receive Date: 12-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil "Dry Weight Corrected"**

Uranium-233/234		3.15	+/-0.683	0.352	0.500	pCi/g			MP2	03/17/21	0922	2103028	1
Uranium-235/236		0.315	+/-0.250	0.135	0.500	pCi/g							
Uranium-238		2.01	+/-0.545	0.282	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.295	+/-0.474	0.808	1.00	pCi/g			JJ3	03/21/21	0738	2103127	2
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**The following Prep Methods were performed:**

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	03/12/21	1643	2102632

**The following Analytical Methods were performed:**

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil "Dry Weight Corrected"			88.4	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			79.2	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 23, 2021

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
 Project: Displaced RI Work Plan

Client Sample ID:	SED-B5-0-6	Project:	WNUC01420
Sample ID:	537660003	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-MAR-21 10:25		
Receive Date:	12-MAR-21		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil "Dry Weight Corrected"</b>													
Uranium-233/234		30.0	+/-2.52	0.439	0.500	pCi/g			MP2	03/17/21	0922	2103028	1
Uranium-235/236		1.36	+/-0.627	0.446	0.500	pCi/g							
Uranium-238		7.25	+/-1.25	0.425	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.565	+/-0.463	0.765	1.00	pCi/g			JJ3	03/21/21	0820	2103127	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	03/12/21	1643	2102632

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil "Dry Weight Corrected"			55.6	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			88	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit





# GEL LABORATORIES LLC

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## Certificate of Analysis

Report Date: March 23, 2021

Company : Westinghouse Electric Company, LLC  
 Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
 Project: Displaced RI Work Plan

Client Sample ID:	SED-B2-0-6	Project:	WNUC01420
Sample ID:	537660005	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-MAR-21 10:50		
Receive Date:	12-MAR-21		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil "Dry Weight Corrected"**

Uranium-233/234		267	+/-5.65	0.321	0.500	pCi/g			MP2	03/17/21	0922	2103028	1
Uranium-235/236		15.8	+/-1.53	0.185	0.500	pCi/g							
Uranium-238		60.3	+/-2.69	0.261	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99		19.1	+/-0.989	0.724	1.00	pCi/g			JJ3	03/21/21	0945	2103127	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	03/12/21	1643	2102632

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil "Dry Weight Corrected"			65.1	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			86.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 23, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Displaced RI Work Plan

Client Sample ID:	SED-B2-6-12	Project:	WNUC01420
Sample ID:	537660006	Client ID:	WNUC009
Matrix:	Solid		
Collect Date:	10-MAR-21 11:00		
Receive Date:	12-MAR-21		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil "Dry Weight Corrected"**

Uranium-233/234		5.45	+/-0.712	0.202	0.500	pCi/g			MP2	03/17/21	0922	2103028	1
Uranium-235/236		0.405	+/-0.225	0.141	0.500	pCi/g							
Uranium-238		2.30	+/-0.466	0.185	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99	U	0.720	+/-0.483	0.786	1.00	pCi/g			JJ3	03/21/21	1028	2103127	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	03/12/21	1643	2102632

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil "Dry Weight Corrected"			103	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			84.9	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 23, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Displaced RI Work Plan

Client Sample ID: SED-B6-0-6	Project: WNUC01420
Sample ID: 537660007	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-MAR-21 11:10	
Receive Date: 12-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
<b>Rad Alpha Spec Analysis</b>													
<b>Alphaspec U, Soil "Dry Weight Corrected"</b>													
Uranium-233/234		30.4	+/-2.26	0.424	0.500	pCi/g			MP2	03/17/21	0922	2103028	1
Uranium-235/236		1.82	+/-0.621	0.161	0.500	pCi/g							
Uranium-238		6.94	+/-1.08	0.265	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99		1.13	+/-0.491	0.768	1.00	pCi/g			JJ3	03/21/21	1110	2103127	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	03/12/21	1643	2102632

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil "Dry Weight Corrected"			74.7	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			86.7	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

## Certificate of Analysis

Report Date: March 23, 2021

Company : Westinghouse Electric Company, LLC  
Address : PO Drawer R

Columbia, South Carolina 29205

Contact: Ms. Cynthia Teague  
Project: Displaced RI Work Plan

Client Sample ID: SED-B6-6-12	Project: WNUC01420
Sample ID: 537660008	Client ID: WNUC009
Matrix: Solid	
Collect Date: 10-MAR-21 11:15	
Receive Date: 12-MAR-21	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	PF	DF	Analyst	Date	Time	Batch	Method
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**Rad Alpha Spec Analysis**

**Alphaspec U, Soil "Dry Weight Corrected"**

Uranium-233/234		7.98	+/-1.01	0.303	0.500	pCi/g			MP2	03/17/21	0922	2103028	1
Uranium-235/236		0.447	+/-0.276	0.122	0.500	pCi/g							
Uranium-238		2.89	+/-0.612	0.216	0.500	pCi/g							

**Rad Liquid Scintillation Analysis**

**Liquid Scint Tc99, Soil "As Received"**

Technetium-99		1.36	+/-0.547	0.849	1.00	pCi/g			JJ3	03/21/21	1153	2103127	2
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The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXB7	03/12/21	1643	2102632

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE EML HASL-300, U-02-RC Modified	
2	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Uranium-232 Tracer	Alphaspec U, Soil "Dry Weight Corrected"			76	(15%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Soil "As Received"			80.6	(15%-125%)

**Notes:**

Counting Uncertainty is calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor	Lc/LC: Critical Level
DL: Detection Limit	PF: Prep Factor
MDA: Minimum Detectable Activity	RL: Reporting Limit
MDC: Minimum Detectable Concentration	SQL: Sample Quantitation Limit

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: March 23, 2021

Page 1 of 1

Westinghouse Electric Company, LLC  
PO Drawer R  
Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 537660

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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### Notes:

The Qualifiers in this report are defined as follows:

- < Result is less than value reported
- > Result is greater than value reported
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- N/A RPD or %Recovery limits do not apply.
- NI See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- ^ 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.

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Report Date: March 23, 2021

Page 1 of 3

Westinghouse Electric Company, LLC  
 PO Drawer R  
 Columbia, South Carolina

Contact: Ms. Cynthia Teague

Workorder: 537660

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Alpha Spec</b>											
Batch	2103028										
QC1204773884	537660001	DUP									
Uranium-233/234		401		406	pCi/g	1.3		(0%-20%)	MP2	03/17/21	09:22
Uranium-235/236		26.9		25.3	pCi/g	6.26		(0%-20%)			
Uranium-238		95.7		95.5	pCi/g	0.139		(0%-20%)			
QC1204773885	LCS										
Uranium-233/234				9.55	pCi/g					03/17/21	09:22
Uranium-235/236				0.771	pCi/g						
Uranium-238	9.44			10.0	pCi/g		106	(75%-125%)			
QC1204773883	MB										
Uranium-233/234			U	0.0425	pCi/g					03/19/21	09:16
Uranium-235/236			U	-0.0136	pCi/g						
Uranium-238			U	0.000916	pCi/g						
<b>Rad Liquid Scintillation</b>											
Batch	2103127										
QC1204774090	537660001	DUP									
Technetium-99		23.7		19.8	pCi/g	17.7		(0%-20%)	JJ3	03/21/21	13:18
QC1204774091	LCS										
Technetium-99	33.4			39.3	pCi/g		118	(75%-125%)		03/21/21	14:00

# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 537660

Page 2 of 3

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
<b>Rad Liquid Scintillation</b>											
Batch	2103127										
QC1204774089	MB										
Technetium-99			U	-0.130	pCi/g				JJ3	03/21/21	12:35

### Notes:

The Qualifiers in this report are defined as follows:

- \*\* Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J See case narrative for an explanation
- J Value is estimated
- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD
- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- NI See case narrative
- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded



# GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

## QC Summary

Workorder: 537660

Page 3 of 3

<u>Parmname</u>	<u>NOM</u>	<u>Sample</u>	<u>Qual</u>	<u>QC</u>	<u>Units</u>	<u>RPD%</u>	<u>REC%</u>	<u>Range</u>	<u>Anlst</u>	<u>Date</u>	<u>Time</u>
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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.

**Technical Case Narrative**  
**Westinghouse Electric Co, LLC**  
**SDG #: 537660**

## **Radiochemistry**

**Product:** Alphaspec U, Soil

**Analytical Method:** DOE EML HASL-300, U-02-RC Modified

**Analytical Procedure:** GL-RAD-A-011 REV# 28

**Analytical Batch:** 2103028

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2102632

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537660001	SED-B1-0-6
537660002	SED-B1-6-12
537660003	SED-B5-0-6
537660004	SED-B5-6-12
537660005	SED-B2-0-6
537660006	SED-B2-6-12
537660007	SED-B6-0-6
537660008	SED-B6-6-12
1204773883	Method Blank (MB)
1204773884	537660001(SED-B1-0-6) Sample Duplicate (DUP)
1204773885	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

### **Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Technical Information**

#### **Recounts**

Sample 1204773883 (MB) was given additional clean-up steps and recounted in order to remove suspected interferences. The recount is reported.

**Product:** Dry Weight

**Preparation Method:** Dry Soil Prep

**Preparation Procedure:** GL-RAD-A-021 REV# 24

**Preparation Batch:** 2102632

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537660001	SED-B1-0-6
537660002	SED-B1-6-12
537660003	SED-B5-0-6
537660004	SED-B5-6-12
537660005	SED-B2-0-6
537660006	SED-B2-6-12
537660007	SED-B6-0-6
537660008	SED-B6-6-12

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

**Product:** Liquid Scint Tc99, Soil

**Analytical Method:** DOE EML HASL-300, Tc-02-RC Modified

**Analytical Procedure:** GL-RAD-A-059 REV# 5

**Analytical Batch:** 2103127

The following samples were analyzed using the above methods and analytical procedure(s).

<b><u>GEL Sample ID#</u></b>	<b><u>Client Sample Identification</u></b>
537660001	SED-B1-0-6
537660002	SED-B1-6-12
537660003	SED-B5-0-6
537660004	SED-B5-6-12
537660005	SED-B2-0-6
537660006	SED-B2-6-12
537660007	SED-B6-0-6
537660008	SED-B6-6-12
1204774089	Method Blank (MB)
1204774090	537660001(SED-B1-0-6) Sample Duplicate (DUP)
1204774091	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

**Data Summary:**

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

### **Technical Information**

#### **Recounts**

Samples 537660004 (SED-B5-6-12), 537660005 (SED-B2-0-6), 537660007 (SED-B6-0-6) and 537660008 (SED-B6-6-12) were recounted to verify sample results. The recount results are similar to the original results. Original results are reported.

### **Certification Statement**

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

# GEL Chain of Custody and Analytical Request

GEL Laboratories, LLC  
 2040 Savage Road  
 Charleston, SC 29407  
 Phone: (843) 556-8171  
 Fax: (843) 766-1178

537660

GEL Work Order Number:

Client Name: Westinghouse

Project/Site Name: Westinghouse RI Phase II

Phone #:

Address: 5801 Bluff Rd, Hopkins, SC 29061

Sample Analysis Requested (6) (Fill in the number of containers for each test)

Fax #:

Collected by: S. Becker-Medina Send Results To: joynedp@westinghouse.com

Sample ID <i>* For composites - indicate start and stop date/time</i>	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (a)	Field Filtered (b)	Sample Matrix (c)	Should this sample be considered:		Total number of containers	<-- Preservative Type (6)	Comments Note: extra sample is required for sample specific QC
						Radioactive	TSCA Regulated			
SED-B1-0-6	03-10-21	1000	G	N	SD			1		
SED-B1-6-12		1010	G	N	SD			1		
SED-B5-0-6		1025	G	N	SD			1		
SED-B5-6-12		1035	G	N	SD			1		
SED-BA-0-6		1050	G	N	SD			1		
SED-BA-6-12		1100	G	N	SD			1		
SED-B6-0-6		1110	G	N	SD			1		
SED-B6-6-12		1115	G	N	SD			1		

TAT Requested: Normal:  Rush:  Specify: 2 Weeks (Subject to Surcharges) Fax Results: Yes / No  
 Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Chain of Custody Signatures		Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Received by (signed)	Date
<u>S. Becker</u>	<u>3/12/21 1200</u>	<u>S. Becker</u>	<u>3/12/21 1200</u>
		<u>M. Brubaker</u>	<u>3/12/21 1506</u>

Circle Deliverable: C of A / QC Summary / Level 1 / Level 2 / Level 3 / Level 4  
 Sample Collection Time Zone: Eastern Pacific Other \_\_\_\_\_  
 GEL PM: \_\_\_\_\_  
 Method of Shipment: \_\_\_\_\_ Date Shipped: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_  
 Airbill #: \_\_\_\_\_

For Lab Receiving Use Only  
 Custody Seal Intact? YES NO  
 Cooler Temp: 2 C

1.) Chain of Custody Number = Client Determined  
 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite  
 3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.  
 4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal  
 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).  
 6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate. If no preservative is added = leave field blank  
 WHITE = LABORATORY YELLOW = FILE PINK = CLIENT



**List of current GEL Certifications as of 23 March 2021**

<b>State</b>	<b>Certification</b>
Alabama	42200
Alaska	17-018
Alaska Drinking Water	SC00012
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana Drinking Water	LA024
Louisiana NELAP	03046 (AI33904)
Maine	2019020
Maryland	270
Massachusetts	M-SC012
Massachusetts PFAS Approv	Letter
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122021-1
New Hampshire NELAP	2054
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	2019-165
Pennsylvania NELAP	68-00485
Puerto Rico	SC00012
S. Carolina Radiochem	10120002
Sanitation Districts of L	9255651
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-21-19
Utah NELAP	SC000122020-34
Vermont	VT87156
Virginia NELAP	460202
Washington	C780