

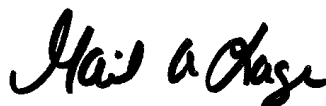
ANALYTICAL REPORT

Eurofins TestAmerica, Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

Laboratory Job ID: 490-164491-1
Client Project/Site: CUF_BS_20181206_1B
Revision: 1

For:
Environmental Standards Inc.
1140 Valley Forge Road
PO BOX 810
Valley Forge, Pennsylvania 19482-0810

Attn: Jennifer N. Gable



Authorized for release by:
4/22/2019 1:09:51 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Sample Summary

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-164491-1	CUF-BS-FB13-20181206	Water	12/06/18 08:40	12/06/18 18:10
490-164491-2	CUF-BS-BG11-1.0/3.0-20181206	Solid	12/06/18 09:08	12/06/18 18:10
490-164491-3	CUF-BS-BG11-6.5/8.5-20181206	Solid	12/06/18 09:11	12/06/18 18:10
490-164491-4	CUF-BS-BG11-11.2/13.2-20181206	Solid	12/06/18 09:40	12/06/18 18:10
490-164491-5	CUF-BS-BG11-0.0/0.5-20181206	Solid	12/06/18 09:32	12/06/18 18:10
490-164491-6	CUF-BS-BG12-2.5/4.5-20181206	Solid	12/06/18 11:00	12/06/18 18:10
490-164491-7	CUF-BS-BG12-6.5/8.5-20181206	Solid	12/06/18 11:10	12/06/18 18:10
490-164491-8	CUF-BS-BG12-10.6/12.6-20181206	Solid	12/06/18 11:25	12/06/18 18:10
490-164491-9	CUF-BS-BG12-0.0/0.5-20181206	Solid	12/06/18 11:37	12/06/18 18:10
490-164491-10	CUF-BS-EB04-20181206	Water	12/06/18 11:50	12/06/18 18:10

Case Narrative

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Job ID: 490-164491-1

Laboratory: Eurofins TestAmerica, Nashville

Narrative

Job Narrative 490-164491-1

Revised Report

This report was revised to adjust the solid sample results for dry weight using the dry weight results from TA-Nashville. This replaces the previous final report.

Receipt

The samples were received on 12/6/2018 6:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.8° C, 2.6° C, 4.2° C and 4.8° C.

RAD

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Qualifiers

Rad

Qualifier	Qualifier Description
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-FB13-20181206

Lab Sample ID: 490-164491-1

Date Collected: 12/06/18 08:40

Matrix: Water

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-11.5	U	14.9	14.9	50.0	32.9	pCi/L	12/13/18 01:29	01/03/19 01:56	1
Radium-228	5.35	U	8.94	8.96	50.0	28.5	pCi/L	12/13/18 01:29	01/03/19 01:56	1
Radium 226 and 228 (positive only)	5.35	U	8.94	8.96			pCi/L	12/13/18 01:29	01/03/19 01:56	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG11-1.0/3.0-20181206

Lab Sample ID: 490-164491-2

Date Collected: 12/06/18 09:08

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.15		0.271	0.296	1.00	0.222	pCi/g	12/12/18 20:58	01/02/19 12:54	1
Radium-228	1.61		0.369	0.404		0.167	pCi/g	12/12/18 20:58	01/02/19 12:54	1
Radium 226 and 228 (positive only)	2.76		0.458	0.501			pCi/g	12/12/18 20:58	01/02/19 12:54	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG11-6.5/8.5-20181206

Lab Sample ID: 490-164491-3

Date Collected: 12/06/18 09:11

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.48		0.293	0.331	1.00	0.228	pCi/g	12/12/18 20:58	01/02/19 12:55	1
Radium-228	2.25		0.435	0.492		0.155	pCi/g	12/12/18 20:58	01/02/19 12:55	1
Radium 226 and 228 (positive only)	3.73		0.524	0.593			pCi/g	12/12/18 20:58	01/02/19 12:55	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG11-11.2/13.2-20181206

Lab Sample ID: 490-164491-4

Date Collected: 12/06/18 09:40

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.02		0.223	0.247	1.00	0.177	pCi/g	12/12/18 20:58	01/02/19 13:30	1
Radium-228	1.09		0.226	0.252		0.104	pCi/g	12/12/18 20:58	01/02/19 13:30	1
Radium 226 and 228 (positive only)	2.11		0.317	0.353			pCi/g	12/12/18 20:58	01/02/19 13:30	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG11-0.0/0.5-20181206

Lab Sample ID: 490-164491-5

Date Collected: 12/06/18 09:32

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.08		0.220	0.246	1.00	0.113	pCi/g	12/12/18 20:58	01/02/19 13:31	1
Radium-228	0.694		0.295	0.303		0.487	pCi/g	12/12/18 20:58	01/02/19 13:31	1
Radium 226 and 228 (positive only)	1.77		0.368	0.390			pCi/g	12/12/18 20:58	01/02/19 13:31	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG12-2.5/4.5-20181206

Lab Sample ID: 490-164491-6

Date Collected: 12/06/18 11:00

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2 σ +/-)	Total Uncert. (2 σ +/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.872		0.199	0.218	1.00	0.157	pCi/g	12/12/18 20:58	01/02/19 13:30	1
Radium-228	0.938		0.212	0.232		0.128	pCi/g	12/12/18 20:58	01/02/19 13:30	1
Radium 226 and 228 (positive only)	1.81		0.291	0.318			pCi/g	12/12/18 20:58	01/02/19 13:30	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG12-6.5/8.5-20181206

Lab Sample ID: 490-164491-7

Date Collected: 12/06/18 11:10

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.937		0.201	0.223	1.00	0.151	pCi/g	12/12/18 20:58	01/02/19 13:32	1
Radium-228	0.381	U	0.326	0.329		0.430	pCi/g	12/12/18 20:58	01/02/19 13:32	1
Radium 226 and 228 (positive only)	1.32		0.383	0.397			pCi/g	12/12/18 20:58	01/02/19 13:32	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG12-10.6/12.6-20181206

Lab Sample ID: 490-164491-8

Date Collected: 12/06/18 11:25

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.812		0.176	0.195	1.00	0.134	pCi/g	12/12/18 20:58	01/02/19 14:11	1
Radium-228	0.917		0.219	0.238		0.0965	pCi/g	12/12/18 20:58	01/02/19 14:11	1
Radium 226 and 228 (positive only)	1.73		0.281	0.308			pCi/g	12/12/18 20:58	01/02/19 14:11	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG12-0.0/0.5-20181206

Lab Sample ID: 490-164491-9

Date Collected: 12/06/18 11:37

Matrix: Solid

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.12		0.210	0.239	1.00	0.134	pCi/g	12/12/18 20:58	01/02/19 14:12	1
Radium-228	1.09		0.238	0.263		0.242	pCi/g	12/12/18 20:58	01/02/19 14:12	1
Radium 226 and 228 (positive only)	2.21		0.317	0.355			pCi/g	12/12/18 20:58	01/02/19 14:12	1

Client Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-EB04-20181206

Lab Sample ID: 490-164491-10

Date Collected: 12/06/18 11:50

Matrix: Water

Date Received: 12/06/18 18:10

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	9.67	U	5.83	5.91	50.0	39.8	pCi/L	12/13/18 01:29	01/03/19 02:04	1
Radium-228	2.77	U	3.98	3.99	50.0	43.1	pCi/L	12/13/18 01:29	01/03/19 02:04	1
Radium 226 and 228 (positive only)	12.4	U	7.06	7.13			pCi/L	12/13/18 01:29	01/03/19 02:04	1

QC Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS)

Lab Sample ID: MB 160-405451/1-A

Matrix: Solid

Analysis Batch: 408603

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 405451

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.04275	U	0.0776	0.0777	1.00	0.260	pCi/g	12/12/18 20:58	01/02/19 12:53	1
Radium-228	-0.03762	U	0.131	0.131		0.165	pCi/g	12/12/18 20:58	01/02/19 12:53	1
Radium 226 and 228 (positive only)	0.0000	U	0.00000	0.00000			pCi/g	12/12/18 20:58	01/02/19 12:53	1

Lab Sample ID: LCS 160-405451/2-A

Matrix: Solid

Analysis Batch: 408602

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 405451

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Americium-241	96.7	99.70		11.7		1.13	pCi/g	103	87 - 116
Cesium-137	28.0	30.48		3.20		0.248	pCi/g	109	87 - 120
Cobalt-60	12.2	12.91		1.35		0.169	pCi/g	106	87 - 115

Lab Sample ID: 490-164491-8 DU

Matrix: Solid

Analysis Batch: 408602

Client Sample ID: CUF-BS-BG12-10.6/12.6-20181206

Prep Type: Total/NA

Prep Batch: 405451

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	0.812		0.9066		0.232	1.00	0.232	pCi/g	0.22	1
Radium-228	0.917		1.132		0.325		0.209	pCi/g	0.38	1
Radium 226 and 228 (positive only)	1.73		2.039		0.399			pCi/g	0.44	

Lab Sample ID: MB 160-405454/1-A

Matrix: Water

Analysis Batch: 408894

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 405454

Analyte	MB Result	MB Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-6.406	U	21.1	21.2	50.0	36.0	pCi/L	12/13/18 01:29	01/03/19 02:00	1
Radium-228	10.52	U	19.1	19.2	50.0	22.9	pCi/L	12/13/18 01:29	01/03/19 02:00	1
Radium 226 and 228 (positive only)	10.52	U	19.1	19.2			pCi/L	12/13/18 01:29	01/03/19 02:00	1

Lab Sample ID: LCS 160-405454/2-A

Matrix: Water

Analysis Batch: 408895

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 405454

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec. Limits
Americium-241	136000	130900		15100		273	pCi/L	96	90 - 111
Cesium-137	45000	44560		4460		80.1	pCi/L	99	90 - 111
Cobalt-60	31100	30070		2970		43.0	pCi/L	97	89 - 110

Eurofins TestAmerica, Nashville

QC Sample Results

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Method: 901.1 - Radium-226 & Other Gamma Emitters (GS) (Continued)

Lab Sample ID: 490-164491-1 DU
Matrix: Water
Analysis Batch: 408895

Client Sample ID: CUF-BS-FB13-20181206
Prep Type: Total/NA
Prep Batch: 405454

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-226	-11.5	U	-15.68	U	15.5	50.0	36.2	pCi/L	0.14	1
Radium-228	5.35	U	-1.962	U	4.03	50.0	35.1	pCi/L	0.56	1
Radium 226 and 228 (positive only)	5.35	U	0.0000	U	0.00000			pCi/L	0.16	

QC Association Summary

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Rad

Prep Batch: 405451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-164491-2	CUF-BS-BG11-1.0/3.0-20181206	Total/NA	Solid	Fill_Geo-21	
490-164491-3	CUF-BS-BG11-6.5/8.5-20181206	Total/NA	Solid	Fill_Geo-21	
490-164491-4	CUF-BS-BG11-11.2/13.2-20181206	Total/NA	Solid	Fill_Geo-21	
490-164491-5	CUF-BS-BG11-0.0/0.5-20181206	Total/NA	Solid	Fill_Geo-21	
490-164491-6	CUF-BS-BG12-2.5/4.5-20181206	Total/NA	Solid	Fill_Geo-21	
490-164491-7	CUF-BS-BG12-6.5/8.5-20181206	Total/NA	Solid	Fill_Geo-21	
490-164491-8	CUF-BS-BG12-10.6/12.6-20181206	Total/NA	Solid	Fill_Geo-21	
490-164491-9	CUF-BS-BG12-0.0/0.5-20181206	Total/NA	Solid	Fill_Geo-21	
MB 160-405451/1-A	Method Blank	Total/NA	Solid	Fill_Geo-21	
LCS 160-405451/2-A	Lab Control Sample	Total/NA	Solid	Fill_Geo-21	
490-164491-8 DU	CUF-BS-BG12-10.6/12.6-20181206	Total/NA	Solid	Fill_Geo-21	

Prep Batch: 405454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-164491-1	CUF-BS-FB13-20181206	Total/NA	Water	Fill_Geo-21	
490-164491-10	CUF-BS-EB04-20181206	Total/NA	Water	Fill_Geo-21	
MB 160-405454/1-A	Method Blank	Total/NA	Water	Fill_Geo-21	
LCS 160-405454/2-A	Lab Control Sample	Total/NA	Water	Fill_Geo-21	
490-164491-1 DU	CUF-BS-FB13-20181206	Total/NA	Water	Fill_Geo-21	

Lab Chronicle

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-FB13-20181206

Lab Sample ID: 490-164491-1

Date Collected: 12/06/18 08:40

Matrix: Water

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 mL	405454	12/13/18 01:29	MPT	TAL SL
Total/NA	Analysis	901.1		1			408896	01/03/19 01:56	CDR	TAL SL

Client Sample ID: CUF-BS-BG11-1.0/3.0-20181206

Lab Sample ID: 490-164491-2

Date Collected: 12/06/18 09:08

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			291 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408606	01/02/19 12:54	RTM	TAL SL

Client Sample ID: CUF-BS-BG11-6.5/8.5-20181206

Lab Sample ID: 490-164491-3

Date Collected: 12/06/18 09:11

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			276.7 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408607	01/02/19 12:55	RTM	TAL SL

Client Sample ID: CUF-BS-BG11-11.2/13.2-20181206

Lab Sample ID: 490-164491-4

Date Collected: 12/06/18 09:40

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			331.8 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408603	01/02/19 13:30	RTM	TAL SL

Client Sample ID: CUF-BS-BG11-0.0/0.5-20181206

Lab Sample ID: 490-164491-5

Date Collected: 12/06/18 09:32

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			331.6 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408602	01/02/19 13:31	RTM	TAL SL

Client Sample ID: CUF-BS-BG12-2.5/4.5-20181206

Lab Sample ID: 490-164491-6

Date Collected: 12/06/18 11:00

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			353.7 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408606	01/02/19 13:30	RTM	TAL SL

Eurofins TestAmerica, Nashville

Lab Chronicle

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Client Sample ID: CUF-BS-BG12-6.5/8.5-20181206

Lab Sample ID: 490-164491-7

Date Collected: 12/06/18 11:10

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			342 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408607	01/02/19 13:32	RTM	TAL SL

Client Sample ID: CUF-BS-BG12-10.6/12.6-20181206

Lab Sample ID: 490-164491-8

Date Collected: 12/06/18 11:25

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			342.4 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408603	01/02/19 14:11	RTM	TAL SL

Client Sample ID: CUF-BS-BG12-0.0/0.5-20181206

Lab Sample ID: 490-164491-9

Date Collected: 12/06/18 11:37

Matrix: Solid

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			362.4 g	1.0 g	405451	12/12/18 20:58	MPT	TAL SL
Total/NA	Analysis	901.1		1			408602	01/02/19 14:12	RTM	TAL SL

Client Sample ID: CUF-BS-EB04-20181206

Lab Sample ID: 490-164491-10

Date Collected: 12/06/18 11:50

Matrix: Water

Date Received: 12/06/18 18:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Fill_Geo-21			1000 mL	1.0 mL	405454	12/13/18 01:29	MPT	TAL SL
Total/NA	Analysis	901.1		1			408900	01/03/19 02:04	RTM	TAL SL

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Method Summary

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Method	Method Description	Protocol	Laboratory
901.1	Radium-226 & Other Gamma Emitters (GS)	EPA	TAL SL
Fill_Geo-21	Fill Geometry, 21-Day In-Growth	None	TAL SL

Protocol References:

EPA = US Environmental Protection Agency
None = None

Laboratory References:

TAL SL = Eurofins TestAmerica, St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Laboratory: Eurofins TestAmerica, Nashville

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	ISO/IEC 17025		0453.07	12-31-19
Alaska (UST)	State Program	10	UST-087	06-30-19
Arizona	State Program	9	AZ0473	05-05-19
Arkansas DEQ	State Program	6	88-0737	04-25-20
California	State Program	9	2938	06-30-19
Connecticut	State Program	1	PH-0220	12-31-19
Florida	NELAP	4	E87358	06-30-19
Georgia	State Program	4	NA: NELAP & A2LA	12-31-19
Illinois	NELAP	5	200010	12-09-19
Iowa	State Program	7	131	04-01-20
Kansas	NELAP	7	E-10229	10-31-19
Kentucky (UST)	State Program	4	19	06-30-19
Kentucky (WW)	State Program	4	90038	12-31-19
Louisiana	NELAP	6	30613	06-30-19
Maine	State Program	1	TN00032	11-03-19
Maryland	State Program	3	316	03-31-20
Massachusetts	State Program	1	M-TN032	06-30-19
Minnesota	NELAP	5	047-999-345	12-31-19
Mississippi	State Program	4	N/A	06-30-19
Montana (UST)	State Program	8	NA	02-17-19
Nevada	State Program	9	TN00032	07-31-19
New Hampshire	NELAP	1	2963	10-09-19
New Jersey	NELAP	2	TN965	06-30-19
New York	NELAP	2	11342	03-31-20
North Carolina (WW/SW)	State Program	4	387	12-31-19
North Dakota	State Program	8	R-146	06-30-19
Ohio VAP	State Program	5	CL0033	07-06-19
Oklahoma	State Program	6	9412	08-31-19
Oregon	NELAP	10	TN200001	04-26-19
Pennsylvania	NELAP	3	68-00585	07-31-19
Rhode Island	State Program	1	LAO00268	12-30-19
South Carolina	State Program	4	84009 (001)	02-28-19 *
Tennessee	State Program	4	2008	02-23-20
Texas	NELAP	6	T104704077	08-31-19
USDA	Federal		P330-13-00306	04-10-20
Utah	NELAP	8	TN00032	07-31-19
Virginia	NELAP	3	460152	06-14-19
Washington	State Program	10	C789	07-19-19
West Virginia DEP	State Program	3	219	02-28-19 *
Wisconsin	State Program	5	998020430	08-31-19
Wyoming (UST)	A2LA	8	453.07	12-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Nashville

Accreditation/Certification Summary

Client: Environmental Standards Inc.
Project/Site: CUF_BS_20181206_1B

Job ID: 490-164491-1

Laboratory: Eurofins TestAmerica, St. Louis

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	MO00054	06-30-19
ANAB	DoD / DOE		L2305	04-06-22
Arizona	State Program	9	AZ0813	12-08-19
California	State Program	9	2886	06-30-19 *
Connecticut	State Program	1	PH-0241	03-31-21
Florida	NELAP	4	E87689	06-30-19 *
Hawaii	State Program	9	NA	06-30-19
Illinois	NELAP	5	200023	11-30-19
Iowa	State Program	7	373	12-01-20
Kansas	NELAP	7	E-10236	10-31-19
Kentucky (DW)	State Program	4	KY90125	12-31-19
Louisiana	NELAP	6	04080	06-30-19
Louisiana (DW)	NELAP	6	LA011	12-31-19
Maryland	State Program	3	310	09-30-19
Michigan	State Program	5	9005	06-30-19
Missouri	State Program	7	780	06-30-19
Nevada	State Program	9	MO000542018-1	07-31-19
New Jersey	NELAP	2	MO002	06-30-19 *
New York	NELAP	2	11616	03-31-20
North Dakota	State Program	8	R207	06-30-19 *
NRC	NRC		24-24817-01	12-31-22
Oklahoma	State Program	6	9997	08-31-19
Pennsylvania	NELAP	3	68-00540	02-28-20
South Carolina	State Program	4	85002001	06-30-19
Texas	NELAP	6	T104704193-18-13	07-31-19
US Fish & Wildlife	Federal		058448	07-31-19
USDA	Federal		P330-17-0028	02-02-20
Utah	NELAP	8	MO000542018-10	07-31-19
Virginia	NELAP	3	460230	06-14-19 *
Washington	State Program	10	C592	08-30-19
West Virginia DEP	State Program	3	381	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Nashville

COOLER RECEIPT FORM



490-164491 Chain of Custody

Cooler Received/Opened On 12/6/2018 @ 18:10

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # NA (last 4 digits, FedEx) Courier: Lab

IR Gun ID 31470366 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 4.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) ACG

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA



14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (initial) E4

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) E4

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) E4

I certify that I attached a label with the unique LIMS number to each container (initial) E4

21. Were there Non-Conformance issues at login? YES...NO...# Was a NCM generated? YES...NO...#

COOLER RECEIPT FORM

Cooler Received/Opened On 12/6/2018 @ 18:10

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # NA (last 4 digits, FedEx) Courier: Lab

IR Gun ID 31470366 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 1.8 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: 2 Front

5. Were the seals intact, signed, and dated correctly? YES NO NA

6. Were custody papers inside cooler? YES NO NA

I certify that I opened the cooler and answered questions 1-6 (initial) ACE

7. Were custody seals on containers: YES NO and Intact YES NO NA

Were these signed and dated correctly? YES NO NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES NO NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES NO NA

12. Did all container labels and tags agree with custody papers? YES NO NA

13a. Were VOA vials received? YES NO NA

b. Was there any observable headspace present in any VOA vial? YES NO NA



14. Was there a Trip Blank in this cooler? YES NO NA If multiple coolers, sequence # NA

I certify that I unloaded the cooler and answered questions 7-14 (initial) EIA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES NO NA

b. Did the bottle labels indicate that the correct preservatives were used YES NO NA

16. Was residual chlorine present? YES NO NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) EIA

17. Were custody papers properly filled out (ink, signed, etc)? YES NO NA

18. Did you sign the custody papers in the appropriate place? YES NO NA

19. Were correct containers used for the analysis requested? YES NO NA

20. Was sufficient amount of sample sent in each container? YES NO NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) EIA

I certify that I attached a label with the unique LIMS number to each container (initial) EIA

21. Were there Non-Conformance issues at login? YES NO Was a NCM generated? YES NO # _____

COOLER RECEIPT FORM

Loc: 490
164491
#1
A

Cooler Received/Opened On 12/6/2018 @ 18:10

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # NA (last 4 digits, FedEx) Courier: Lab

IR Gun ID 31470366 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 4.2 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 1 Front / Back

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) ACE

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry Ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA



14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 1A

I certify that I unloaded the cooler and answered questions 7-14 (initial) EA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) EA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) EA

I certify that I attached a label with the unique LIMS number to each container (initial) EQ

21. Were there Non-Conformance issues at login? YES...NO... Was a NCM generated? YES...NO...# _____

COOLER RECEIPT FORM

Cooler Received/Opened On 12/6/2018 @ 18:10

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # NA (last 4 digits, FedEx) Courier: Lab

IR Gun ID 31470366 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 2.6 Degrees Celsius

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO...NA

4. Were custody seals on outside of cooler? YES...NO...NA

If yes, how many and where: 2 Front

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (initial) ACB

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA



Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence # 114

I certify that I unloaded the cooler and answered questions 7-14 (initial) EA

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used? YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (initial) EA

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (initial) EA

I certify that I attached a label with the unique LIMS number to each container (initial) EA

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...# _____



Tennessee Valley Authority

COOLER No.:	1	of	4
COC No:	CUF_BS 20181206_1B		
1		of	1
Task Desc:		CUF_BS	

Chain-of-Custody / Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate

[illegible]

3-2, 4, 2, 6

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Phone (615) 726-0177 Fax (615) 726-3404

Chain of Custody Record



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:					
Client Contact:		Phone:	Lab. Gail		490-83533-1					
Shipping/Receiving:		E-Mail:	gail.lage@testamericainc.com	State of Origin:	Page:					
Company:		Accreditations Required (See note):		Tennessee	Page 1 of 2					
Address:		Due Date Requested:	Job #:							
13715 Rider Trail North,		12/18/2018	490-164491-1							
City:		TAT Requested (days):	Preservation Codes:							
Earth City			A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2OAS E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecylhydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4.5 L - EDA Z - other (Specify) Other:							
Phone:		PO #:								
314-298-8566(Tel) 314-298-8757(Fax)		WO #:								
Email:		Project #:								
CUF-BS-20181206-1B		49014071								
Site:		SSOW#:								
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=C-comp, G=grab)	Matrix (W=water, S=solid, O=waste/oli, E=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Analysis Requested	Total Number of containers	Special Instructions/Note:
CUF-BS-FB13-20181206 (490-164491-1)		12/6/18	08:40	Central	Water	X	X		3	TVA
CUF-BS-BG11-1.0/3.0-20181206 (490-164491-2)		12/6/18	09:08	Central	Solid		X		2	TVA
CUF-BS-BG11-6.5/8.5-20181206 (490-164491-3)		12/6/18	09:11	Central	Solid		X		2	TVA
CUF-BS-BG11-1.2/1.3.2-20181206 (490-164491-4)		12/6/18	09:40	Central	Solid		X		2	TVA
CUF-BS-BG11-0.0/0.5-20181206 (490-164491-5)		12/6/18	09:32	Central	Solid		X		2	TVA
CUF-BS-BG12-2.5/4.5-20181206 (490-164491-6)		12/6/18	11:00	Central	Solid		X		2	TVA
CUF-BS-BG12-6.5/8.5-20181206 (490-164491-7)		12/6/18	11:10	Central	Solid		X		2	TVA
CUF-BS-BG12-10.6/12.6-20181206 (490-164491-8)		12/6/18	11:25	Central	Solid		X		2	TVA
CUF-BS-BG12-0.0/0.5-20181206 (490-164491-9)		12/6/18	11:37	Central	Solid		X		2	TVA
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.</p>										
Possible Hazard Identification										
Unconfirmed										
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
				<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Special Instructions/QC Requirements:										
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:						
Relinquished by: <i>W. J. J.</i>		12-10-18 11:40		Received by: <i>Michael Kern</i> Date/Time: 12/11/18 11:10 Company: <i>MASS</i>						
Relinquished by:		Date/Time:		Received by: _____ Date/Time: _____ Company: _____						
Relinquished by:		Date/Time:		Received by: _____ Date/Time: _____ Company: _____						
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:						

Chain of Custody Record

[illegible]

Login Sample Receipt Checklist

Client: Environmental Standards Inc.

Job Number: 490-164491-1

Login Number: 164491

List Number: 2

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 12/12/18 03:01 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Environmental Standards Inc.

Job Number: 490-164491-1

Login Number: 164491

List Number: 3

Creator: Hellm, Michael

List Source: Eurofins TestAmerica, St. Louis

List Creation: 12/12/18 03:48 PM

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	18.0
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is $<6\text{mm}$ (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	