CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, LLC.
2600 Canton Ct, Unit C, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

Batch:

PAGE ____ OF ____

Client No.
LAB

CLIENT: **Stewart Environmental**

SAMPLER
Print:
Signature:

Sample No.	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	Chlorine (ppm) if applicable	SAMPLE IDENTIFICATION / NAME	Matrix Type	QC Report Needed	Total No. of Bottles	Analyses Requested
	7/12/17	1600			MW 13	WW		3	8260B including: 1,1-DCE; Freon-11; Freon-113; Trans 1,2-DCE; 1,1-DCA; Cis-1,2-DCE; Chloroform; 2-Butanone (MEK); 4-Isopropyltoluene; 1,1,1-TCA; Trichloroethelene (TCE); Toluene; tetrachloroethylene (Perc); tetrahydrofuran (THF); vinyl chloride; total xylenes; benzene; Acetonitrile (Methyl Cyanide); Ethyl Methacrylate; 2-Pentanone, 4-Methanone

Notes:

Relinquished by	Date / Time	Received by	Date / Time
[illegible]	7/12/17 14:15	[illegible]	7/12/17 KAS
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By		Date	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = liquid W = water
S = soil SL = sludge
A = Air SD = Solid

____CDPHE REPORT REQUIRED

PWSID #

REPORT TO: Trevor Mueller
PHONE: 970.226.5500 FAX:
E-MAIL: Lab@stewartenv.com
CLIENT:
ADDRESS: 2600 Canton Ct, Suite C
CITY, STATE, ZIP: Fort Collins, CO 80525
INVOICE TO:
ADDRESS:
CITY, STATE, ZIP:

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Telephone: (970) 226-5500
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Batch:

PAGE ____ OF ____

Client No.

LAB

CLIENT: **Stewart Environmental**

SAMPLER

Print:

Signature:

Sample No.	SAMPLE COLLECTION INFO				SAMPLE IDENTIFICATION / NAME	Matrix Type	QC Report Needed	Total No. of Bottles	Analyses Requested
	Date	Time	Grab / Comp	Chlorine (ppm) if applicable					
	7/24/17	13:10			MW-20	WW		3	8260B Including: 1,1-DCE; Freon-11; Freon-113; Trans 1,2-DCE; 1,1-DCA; Cis-1,2-DCE; Chloroform; 2-Butanone (MEK); 4-Isopropyltoluene; 1,1,1-TCA; Trichloroethelene (TCE); Toluene; tetrachloroethylene (Perc); tetrahydrofuran (THF); vinyl chloride; total xylenes; benzene; Acetonitrile (Methyl Cyanide); Ethyl Methacrylate; 2-Pentanone, 4-Methanone

Notes:

Relinquished by	Date / Time	Received by	Date / Time
[signature]	7/24/17 1415	[signature]	7/24/17 1415
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By		Date	

REQUESTED COMPLETION DATE

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PWSID #

REPORT TO: Trevor Mueller

PHONE: 970.226.5500 FAX:

E-MAIL: Lab@stewartenv.com

CLIENT:

ADDRESS: 2600 Canton Ct, Suite C

CITY, STATE, ZIP: Fort Collins, CO 80525

INVOICE TO:

ADDRESS:

CITY, STATE, ZIP:

Login Sample Receipt Checklist

Client: Stewart Environmental Consultants Inc

Job Number: 280-99516-1

Login Number: 99516
List Number: 1
Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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?	True	
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-99707-1
Client Project/Site: Analytical Testing

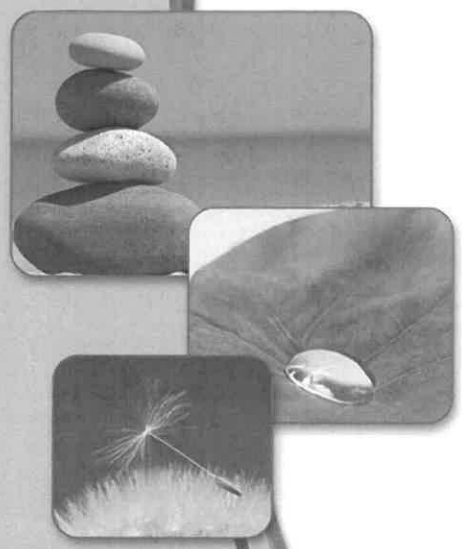
For:
Stewart Environmental Consultants Inc
748 Whalers Way
Unit 210
Fort Collins, Colorado 80525

Attn: Mr. Trevor Mueller

Stephanie Rothmeyer

Authorized for release by:
8/9/2017 11:14:48 AM

Stephanie Rothmeyer, Project Manager I
(303)736-0182
stephanie.rothmeyer@testamericainc.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Job ID: 280-99707-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Stewart Environmental Consultants Inc

Project: Analytical Testing

Report Number: 280-99707-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 7/28/2017 at 4:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

The Sampler field on the COC was not filled out. The client was notified on 7/31/17.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Sample MW4 (280-99707-1) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 08/07/2017.

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

TOTAL MERCURY
Sample MW4 (280-99707-1) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 08/01/2017.

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

TOTAL CYANIDE
Samples MW4 (280-99707-1) and MW-13 (280-99707-2) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 08/05/2017.

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

Detection Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Client Sample ID: MW4 — Lab Sample ID: 280-99707-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.0		1.0	0.22	ug/L	1		8260B	Total/NA
2-Butanone (MEK)	3.9	J	6.0	2.0	ug/L	1		8260B	Total/NA
Acetone	9.1	J	10	1.9	ug/L	1		8260B	Total/NA
Chloroform	0.24	J	1.0	0.16	ug/L	1		8260B	Total/NA
Dichlorodifluoromethane	0.59	J	2.0	0.31	ug/L	1		8260B	Total/NA
Trichloroethene	0.29	J	1.0	0.16	ug/L	1		8260B	Total/NA
Mercury	0.037	J	0.20	0.027	ug/L	1		7470A	Total/NA
Cyanide, Total	0.0023	J	0.010	0.0020	mg/L	1		9012A	Total/NA

Client Sample ID: MW-13 — Lab Sample ID: 280-99707-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.0039	J	0.010	0.0020	mg/L	1		9012A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
7470A	Mercury (CVAA)	SW846	TAL DEN
9012A	Cyanide, Total and/or Amenable	SW846	TAL DEN

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-99707-1	MW4	Water	07/27/17 12:00	07/28/17 16:15
280-99707-2	MW-13	Water	07/25/17 17:00	07/28/17 16:15

Client Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW4
Date Collected: 07/27/17 12:00
Date Received: 07/28/17 16:15

Lab Sample ID: 280-99707-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/07/17 17:22	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/07/17 17:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/07/17 17:22	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/07/17 17:22	1
1,1-Dichloroethane	**2.0**		1.0	0.22	ug/L			08/07/17 17:22	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/07/17 17:22	1
1,1-Dichloropropene	ND		1.0	0.19	ug/L			08/07/17 17:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			08/07/17 17:22	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/07/17 17:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			08/07/17 17:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			08/07/17 17:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/07/17 17:22	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/07/17 17:22	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/07/17 17:22	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/07/17 17:22	1
1,2-Dichloroethene, Total	ND		1.0	0.24	ug/L			08/07/17 17:22	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/07/17 17:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.16	ug/L			08/07/17 17:22	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			08/07/17 17:22	1
1,3-Dichloropropane	ND		1.0	0.22	ug/L			08/07/17 17:22	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/07/17 17:22	1
2,2-Dichloropropane	ND		1.0	0.18	ug/L			08/07/17 17:22	1
2-Butanone (MEK)	**3.9**	**J**	6.0	2.0	ug/L			08/07/17 17:22	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			08/07/17 17:22	1
2-Hexanone	ND		5.0	1.7	ug/L			08/07/17 17:22	1
2-Pentanone	ND		5.0	1.0	ug/L			08/07/17 17:22	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			08/07/17 17:22	1
4-Isopropyltoluene	ND		1.0	0.20	ug/L			08/07/17 17:22	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/07/17 17:22	1
Acetone	**9.1**	**J**	10	1.9	ug/L			08/07/17 17:22	1
Acetonitrile	ND		30	9.6	ug/L			08/07/17 17:22	1
Benzene	ND		1.0	0.16	ug/L			08/07/17 17:22	1
Bromobenzene	ND		1.0	0.17	ug/L			08/07/17 17:22	1
Bromoform	ND		1.0	0.19	ug/L			08/07/17 17:22	1
Bromomethane	ND		2.0	0.21	ug/L			08/07/17 17:22	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/07/17 17:22	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/07/17 17:22	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/07/17 17:22	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/07/17 17:22	1
Chloroethane	ND		2.0	0.41	ug/L			08/07/17 17:22	1
Chloroform	**0.24**	**J**	1.0	0.16	ug/L			08/07/17 17:22	1
Chloromethane	ND		2.0	0.30	ug/L			08/07/17 17:22	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/07/17 17:22	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/07/17 17:22	1
Dibromomethane	ND		1.0	0.17	ug/L			08/07/17 17:22	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/07/17 17:22	1
Dichlorodifluoromethane	**0.59**	**J**	2.0	0.31	ug/L			08/07/17 17:22	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			08/07/17 17:22	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/07/17 17:22	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW4 — **Lab Sample ID: 280-99707-1**
Date Collected: 07/27/17 12:00 — **Matrix: Water**
Date Received: 07/28/17 16:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Freon 11	ND		2.0	0.29	ug/L			08/07/17 17:22	1
Freon 113	ND		3.0	0.42	ug/L			08/07/17 17:22	1
Hexachlorobutadiene	ND		1.0	0.36	ug/L			08/07/17 17:22	1
Isopropylbenzene	ND		1.0	0.19	ug/L			08/07/17 17:22	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			08/07/17 17:22	1
Methylene Chloride	ND		2.0	0.32	ug/L			08/07/17 17:22	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/07/17 17:22	1
Naphthalene	ND		1.0	0.22	ug/L			08/07/17 17:22	1
n-Butylbenzene	ND		1.0	0.32	ug/L			08/07/17 17:22	1
N-Propylbenzene	ND		1.0	0.16	ug/L			08/07/17 17:22	1
o-Xylene	ND		1.0	0.19	ug/L			08/07/17 17:22	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			08/07/17 17:22	1
Styrene	ND		1.0	0.17	ug/L			08/07/17 17:22	1
tert-Butylbenzene	ND		1.0	0.16	ug/L			08/07/17 17:22	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/07/17 17:22	1
Tetrahydrofuran	ND		7.0	2.0	ug/L			08/07/17 17:22	1
Toluene	ND		1.0	0.17	ug/L			08/07/17 17:22	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/07/17 17:22	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/07/17 17:22	1
Trichloroethene	**0.29**	**J**	1.0	0.16	ug/L			08/07/17 17:22	1
Vinyl chloride	ND		1.0	0.10	ug/L			08/07/17 17:22	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/07/17 17:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 127*		*08/07/17 17:22*	*1*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*		*08/07/17 17:22*	*1*
Dibromofluoromethane (Surr)	*111*		*77 - 120*		*08/07/17 17:22*	*1*
Toluene-d8 (Surr)	*91*		*80 - 125*		*08/07/17 17:22*	*1*

Method: 7470A - Mercury (CVAA)

Client Sample ID: MW4 — **Lab Sample ID: 280-99707-1**
Date Collected: 07/27/17 12:00 — **Matrix: Water**
Date Received: 07/28/17 16:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.037	J	0.20	0.027	ug/L		08/01/17 10:03	08/01/17 15:03	1

General Chemistry

Client Sample ID: MW4 — **Lab Sample ID: 280-99707-1**
Date Collected: 07/27/17 12:00 — **Matrix: Water**
Date Received: 07/28/17 16:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0023	J	0.010	0.0020	mg/L		08/05/17 08:25	08/05/17 12:40	1

Client Sample ID: MW-13 — **Lab Sample ID: 280-99707-2**
Date Collected: 07/25/17 17:00 — **Matrix: Water**
Date Received: 07/28/17 16:15

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0039	J	0.010	0.0020	mg/L		08/05/17 08:25	08/05/17 12:31	1

Surrogate Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	**Client Sample ID**	**12DCE (70-127)**	**BFB (78-120)**	**DBFM (77-120)**	**TOL (80-125)**
280-99707-1	MW4	109	104	111	91
LCS 280-383338/4	Lab Control Sample	93	101	105	90
MB 280-383338/8	Method Blank	91	98	106	87

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

QC Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-383338/8
Matrix: Water
Analysis Batch: 383338

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/07/17 07:31	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/07/17 07:31	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/07/17 07:31	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/07/17 07:31	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/07/17 07:31	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/07/17 07:31	1
1,1-Dichloropropene	ND		1.0	0.19	ug/L			08/07/17 07:31	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			08/07/17 07:31	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/07/17 07:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			08/07/17 07:31	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			08/07/17 07:31	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/07/17 07:31	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/07/17 07:31	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/07/17 07:31	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/07/17 07:31	1
1,2-Dichloroethene, Total	ND		1.0	0.24	ug/L			08/07/17 07:31	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/07/17 07:31	1
1,3,5-Trimethylbenzene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			08/07/17 07:31	1
1,3-Dichloropropane	ND		1.0	0.22	ug/L			08/07/17 07:31	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
2,2-Dichloropropane	ND		1.0	0.18	ug/L			08/07/17 07:31	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/07/17 07:31	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			08/07/17 07:31	1
2-Hexanone	ND		5.0	1.7	ug/L			08/07/17 07:31	1
2-Pentanone	ND		5.0	1.0	ug/L			08/07/17 07:31	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			08/07/17 07:31	1
4-Isopropyltoluene	ND		1.0	0.20	ug/L			08/07/17 07:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/07/17 07:31	1
Acetone	ND		10	1.9	ug/L			08/07/17 07:31	1
Acetonitrile	ND		30	9.6	ug/L			08/07/17 07:31	1
Benzene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
Bromobenzene	ND		1.0	0.17	ug/L			08/07/17 07:31	1
Bromoform	ND		1.0	0.19	ug/L			08/07/17 07:31	1
Bromomethane	ND		2.0	0.21	ug/L			08/07/17 07:31	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/07/17 07:31	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/07/17 07:31	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/07/17 07:31	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/07/17 07:31	1
Chloroethane	ND		2.0	0.41	ug/L			08/07/17 07:31	1
Chloroform	ND		1.0	0.16	ug/L			08/07/17 07:31	1
Chloromethane	ND		2.0	0.30	ug/L			08/07/17 07:31	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/07/17 07:31	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
Dibromomethane	ND		1.0	0.17	ug/L			08/07/17 07:31	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/07/17 07:31	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			08/07/17 07:31	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			08/07/17 07:31	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-383338/8
Matrix: Water
Analysis Batch: 383338

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
Freon 11	ND		2.0	0.29	ug/L			08/07/17 07:31	1
Freon 113	ND		3.0	0.42	ug/L			08/07/17 07:31	1
Hexachlorobutadiene	ND		1.0	0.36	ug/L			08/07/17 07:31	1
Isopropylbenzene	ND		1.0	0.19	ug/L			08/07/17 07:31	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			08/07/17 07:31	1
Methylene Chloride	ND		2.0	0.32	ug/L			08/07/17 07:31	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/07/17 07:31	1
Naphthalene	ND		1.0	0.22	ug/L			08/07/17 07:31	1
n-Butylbenzene	ND		1.0	0.32	ug/L			08/07/17 07:31	1
N-Propylbenzene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
o-Xylene	ND		1.0	0.19	ug/L			08/07/17 07:31	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			08/07/17 07:31	1
Styrene	ND		1.0	0.17	ug/L			08/07/17 07:31	1
tert-Butylbenzene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/07/17 07:31	1
Tetrahydrofuran	ND		7.0	2.0	ug/L			08/07/17 07:31	1
Toluene	ND		1.0	0.17	ug/L			08/07/17 07:31	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/07/17 07:31	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/07/17 07:31	1
Trichloroethene	ND		1.0	0.16	ug/L			08/07/17 07:31	1
Vinyl chloride	ND		1.0	0.10	ug/L			08/07/17 07:31	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/07/17 07:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*91*		*70 - 127*		*08/07/17 07:31*	*1*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*		*08/07/17 07:31*	*1*
Dibromofluoromethane (Surr)	*106*		*77 - 120*		*08/07/17 07:31*	*1*
Toluene-d8 (Surr)	*87*		*80 - 125*		*08/07/17 07:31*	*1*

Lab Sample ID: LCS 280-383338/4
Matrix: Water
Analysis Batch: 383338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	4.33		ug/L		87	65 - 135
1,1,1-Trichloroethane	5.00	4.35		ug/L		87	65 - 135
1,1,2,2-Tetrachloroethane	5.00	4.08		ug/L		82	58 - 135
1,1,2-Trichloroethane	5.00	4.65		ug/L		93	64 - 135
1,1-Dichloroethane	5.00	4.33		ug/L		87	65 - 135
1,1-Dichloroethene	5.00	4.66		ug/L		93	65 - 136
1,1-Dichloropropene	5.00	4.65		ug/L		93	65 - 135
1,2,3-Trichlorobenzene	5.00	4.55		ug/L		91	60 - 135
1,2,3-Trichloropropane	5.00	4.22		ug/L		84	65 - 135
1,2,4-Trichlorobenzene	5.00	4.70		ug/L		94	58 - 135
1,2,4-Trimethylbenzene	5.00	4.40		ug/L		88	65 - 135
1,2-Dibromo-3-Chloropropane	5.00	4.18	J	ug/L		84	57 - 135
1,2-Dibromoethane	5.00	4.26		ug/L		85	65 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-383338/4
Matrix: Water
Analysis Batch: 383338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	5.00	4.49		ug/L		90	65 - 135
1,2-Dichloroethane	5.00	4.30		ug/L		86	65 - 135
1,2-Dichloroethene, Total	10.0	9.40		ug/L		94	65 - 135
1,2-Dichloropropane	5.00	4.69		ug/L		94	64 - 135
1,3,5-Trimethylbenzene	5.00	4.51		ug/L		90	65 - 135
1,3-Dichlorobenzene	5.00	4.45		ug/L		89	65 - 135
1,3-Dichloropropane	5.00	3.89		ug/L		78	64 - 135
1,4-Dichlorobenzene	5.00	4.45		ug/L		89	65 - 135
2,2-Dichloropropane	5.00	4.38		ug/L		88	65 - 135
2-Butanone (MEK)	20.0	16.8		ug/L		84	44 - 177
2-Chlorotoluene	5.00	4.70		ug/L		94	65 - 135
2-Hexanone	20.0	15.4		ug/L		77	57 - 139
2-Pentanone	20.0	13.2		ug/L		66	24 - 135
4-Chlorotoluene	5.00	5.09		ug/L		102	65 - 135
4-Isopropyltoluene	5.00	4.62		ug/L		92	65 - 135
4-Methyl-2-pentanone (MIBK)	20.0	17.6		ug/L		88	60 - 150
Acetone	20.0	16.3		ug/L		81	39 - 156
Benzene	5.00	4.85		ug/L		97	65 - 135
Bromobenzene	5.00	4.35		ug/L		87	65 - 135
Bromoform	5.00	3.94		ug/L		79	62 - 135
Bromomethane	5.00	4.66		ug/L		93	45 - 135
Carbon tetrachloride	5.00	4.49		ug/L		90	65 - 135
Chlorobenzene	5.00	4.53		ug/L		91	65 - 135
Chlorobromomethane	5.00	4.92		ug/L		98	65 - 135
Chlorodibromomethane	5.00	4.19		ug/L		84	65 - 135
Chloroethane	5.00	5.03		ug/L		101	46 - 136
Chloroform	5.00	4.34		ug/L		87	65 - 135
Chloromethane	5.00	4.94		ug/L		99	34 - 145
cis-1,2-Dichloroethene	5.00	4.70		ug/L		94	65 - 135
cis-1,3-Dichloropropene	5.00	4.06		ug/L		81	65 - 135
Dibromomethane	5.00	4.37		ug/L		87	65 - 135
Dichlorobromomethane	5.00	4.15		ug/L		83	65 - 135
Dichlorodifluoromethane	5.00	4.93		ug/L		99	43 - 142
Ethylbenzene	5.00	4.51		ug/L		90	65 - 135
Freon 11	5.00	4.39		ug/L		88	53 - 137
Freon 113	5.00	4.59		ug/L		92	65 - 140
Hexachlorobutadiene	5.00	4.61		ug/L		92	65 - 135
Isopropylbenzene	5.00	4.67		ug/L		93	65 - 135
Methyl tert-butyl ether	5.00	3.98	J	ug/L		80	54 - 135
Methylene Chloride	5.00	4.47		ug/L		89	54 - 141
m-Xylene & p-Xylene	5.00	4.51		ug/L		90	65 - 135
Naphthalene	5.00	4.11		ug/L		82	42 - 135
n-Butylbenzene	5.00	4.32		ug/L		86	64 - 135
N-Propylbenzene	5.00	4.97		ug/L		99	65 - 135
o-Xylene	5.00	4.59		ug/L		92	65 - 135
sec-Butylbenzene	5.00	4.75		ug/L		95	64 - 135
Styrene	5.00	4.25		ug/L		85	65 - 135
tert-Butylbenzene	5.00	4.72		ug/L		94	65 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-383338/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 383338

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	5.00	4.38		ug/L		88	65 - 135
Toluene	5.00	4.69		ug/L		94	65 - 135
trans-1,2-Dichloroethene	5.00	4.70		ug/L		94	65 - 135
trans-1,3-Dichloropropene	5.00	4.22		ug/L		84	65 - 135
Trichloroethene	5.00	4.51		ug/L		90	65 - 135
Vinyl chloride	5.00	4.89		ug/L		98	40 - 137
Xylenes, Total	10.0	9.10		ug/L		91	65 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 127*
4-Bromofluorobenzene (Surr)	*101*		*78 - 120*
Dibromofluoromethane (Surr)	*105*		*77 - 120*
Toluene-d8 (Surr)	*90*		*80 - 125*

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 280-382657/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 382879 — **Prep Batch: 382657**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		08/01/17 10:03	08/01/17 14:03	1

Lab Sample ID: LCS 280-382657/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 382879 — **Prep Batch: 382657**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.74		ug/L		95	84 - 120

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 280-383309/4-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 383318 — **Prep Batch: 383309**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		08/05/17 08:25	08/05/17 12:22	1

Lab Sample ID: HLCS 280-383309/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 383318 — **Prep Batch: 383309**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.350	0.358		mg/L		102	90 - 110

QC Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 280-383309/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 383318 — **Prep Batch: 383309**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.103		mg/L		103	90 - 110

Lab Sample ID: LLCS 280-383309/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 383318 — **Prep Batch: 383309**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.108		mg/L		108	44 - 167

QC Association Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

GC/MS VOA

Analysis Batch: 383338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99707-1	MW4	Total/NA	Water	8260B	
MB 280-383338/8	Method Blank	Total/NA	Water	8260B	
LCS 280-383338/4	Lab Control Sample	Total/NA	Water	8260B	

Metals

Prep Batch: 382657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99707-1	MW4	Total/NA	Water	7470A	
MB 280-382657/1-A	Method Blank	Total/NA	Water	7470A	
LCS 280-382657/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 382879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99707-1	MW4	Total/NA	Water	7470A	382657
MB 280-382657/1-A	Method Blank	Total/NA	Water	7470A	382657
LCS 280-382657/2-A	Lab Control Sample	Total/NA	Water	7470A	382657

General Chemistry

Prep Batch: 383309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99707-1	MW4	Total/NA	Water	9012A	
280-99707-2	MW-13	Total/NA	Water	9012A	
MB 280-383309/4-A	Method Blank	Total/NA	Water	9012A	
HLCS 280-383309/1-A	Lab Control Sample	Total/NA	Water	9012A	
LCS 280-383309/3-A	Lab Control Sample	Total/NA	Water	9012A	
LLCS 280-383309/2-A	Lab Control Sample	Total/NA	Water	9012A	

Analysis Batch: 383318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99707-1	MW4	Total/NA	Water	9012A	383309
280-99707-2	MW-13	Total/NA	Water	9012A	383309
MB 280-383309/4-A	Method Blank	Total/NA	Water	9012A	383309
HLCS 280-383309/1-A	Lab Control Sample	Total/NA	Water	9012A	383309
LCS 280-383309/3-A	Lab Control Sample	Total/NA	Water	9012A	383309
LLCS 280-383309/2-A	Lab Control Sample	Total/NA	Water	9012A	383309

Lab Chronicle

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Client Sample ID: MW4

Lab Sample ID: 280-99707-1

Date Collected: 07/27/17 12:00
Date Received: 07/28/17 16:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	383338	08/07/17 17:22	MRM	TAL DEN
Total/NA	Prep	7470A			30 mL	50 mL	382657	08/01/17 10:03	CDH	TAL DEN
Total/NA	Analysis	7470A		1			382879	08/01/17 15:03	CDH	TAL DEN
Total/NA	Prep	9012A			50 mL	50 mL	383309	08/05/17 08:25	JML	TAL DEN
Total/NA	Analysis	9012A		1	50 mL	50 mL	383318	08/05/17 12:40	JML	TAL DEN

Client Sample ID: MW-13

Lab Sample ID: 280-99707-2

Date Collected: 07/25/17 17:00
Date Received: 07/28/17 16:15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	9012A			50 mL	50 mL	383309	08/05/17 08:25	JML	TAL DEN
Total/NA	Analysis	9012A		1	50 mL	50 mL	383318	08/05/17 12:31	JML	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99707-1

Laboratory: TestAmerica Denver

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	DoD ELAP		2907.01	10-31-17
A2LA	ISO/IEC 17025		2907.01	10-31-17
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-18
Arizona	State Program	9	AZ0713	12-20-17
Arkansas DEQ	State Program	6	88-0687	06-01-18
California	State Program	9	2513	01-08-18
Connecticut	State Program	1	PH-0686	09-30-18
Florida	NELAP	4	E87667	06-30-18
Georgia	State Program	4	N/A	01-08-18
Illinois	NELAP	5	200017	04-30-18
Iowa	State Program	7	370	12-01-18
Kansas	NELAP	7	E-10166	04-30-18
Louisiana	NELAP	6	02096	06-30-18
Maine	State Program	1	CO0002	03-03-19
Minnesota	NELAP	5	8-999-405	12-31-17
Nevada	State Program	9	CO0026	07-31-17 *
New Hampshire	NELAP	1	205310	04-28-18
New Jersey	NELAP	2	CO004	06-30-18
New York	NELAP	2	11964	04-01-18
North Carolina (WW/SW)	State Program	4	358	12-31-17
North Dakota	State Program	8	R-034	01-09-18
Oklahoma	State Program	6	8614	08-31-17
Oregon	NELAP	10	4025	01-08-18
Pennsylvania	NELAP	3	68-00664	07-31-18
South Carolina	State Program	4	72002001	01-08-18
Texas	NELAP	6	T104704183-16-12	09-30-17
USDA	Federal		P330-16-00397	12-15-19
Utah	NELAP	8	CO00026	07-31-17 *
Virginia	NELAP	3	460232	06-14-18
Washington	State Program	10	C583	08-03-18
West Virginia DEP	State Program	3	354	11-30-17
Wisconsin	State Program	5	999615430	08-31-17
Wyoming (UST)	A2LA	8	2907.01	10-31-17

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

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, LLC.
2600 Canton Ct, Unit C, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

Batch:

PAGE ___ OF ___

Client No.

LAB

CLIENT: **Stewart Environmental**

SAMPLER

Print:

Signature:

Sample No.	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	Chlorine (ppm) if positive	SAMPLE IDENTIFICATION / NAME	Matrix Type	QC Report Needed	Total No. of Bottles	Analyses Requested
	7/27	1200			MW4				8260B Including: 1,1-DCE; Freon-11; Freon-113; Trans 1,2-DCE; 1,1-DCA; Cis-1,2-DCE; Chloroform; 2-Butanone (MEK); 4-Isopropyltoluene; 1,1,1-TCA; Trichloroethelene (TCE); Toluene; tetrachloroethylene (Perc); tetrahydrofuran (THF); vinyl chloride; total xylenes; benzene; Acetonitrile (Methyl Cyanide); Ethyl Methacrylate; 2-Pentanone, 4-Methanone Cyanide, Mercury
	7/25	1300			MW-13				Cyanide

280-99707 Chain of Custody

Notes: 2110.0 TR#7 JT 7/28/17

REPORT TO: Trevor Mueller

PHONE: 970.226.5500 FAX:

E-MAIL: Lab@stewartenv.com

CLIENT:

ADDRESS: 2600 Canton Ct, Suite C

CITY, STATE, ZIP: Fort Collins, CO 80525

INVOICE TO:

ADDRESS:

CITY, STATE ZIP:

Relinquished by	Date & Time	Received by	Date / Time
TR — DUM	7/28/17 16:15	[illegible]	7-28-17 1615
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By		Date	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = liquid W = water
S = soil SL = sludge
A = Air SD = Solid

____CDPHE REPORT REQUIRED

PWSID #

Login Sample Receipt Checklist

Client: Stewart Environmental Consultants Inc

Job Number: 280-99707-1

Login Number: 99707
List Number: 1
Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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?	False	Refer to Job Narrative for details.
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-99776-1
Client Project/Site: Analytical Testing

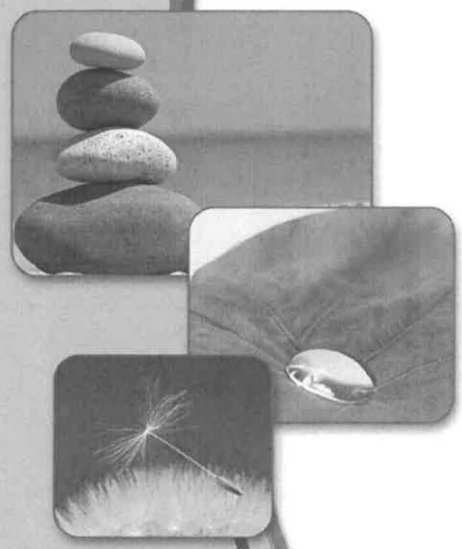
For:
Stewart Environmental Consultants Inc
748 Whalers Way
Unit 210
Fort Collins, Colorado 80525

Attn: Mr. Trevor Mueller

Stephanie Rothmeyer

Authorized for release by:
8/14/2017 10:18:10 AM

Stephanie Rothmeyer, Project Manager I
(303)736-0182
stephanie.rothmeyer@testamericainc.com



LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Definitions/Glossary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Job ID: 280-99776-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Stewart Environmental Consultants Inc

Project: Analytical Testing

Report Number: 280-99776-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

Receipt

The sample was received on 8/1/2017 at 1:00 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.5° C.

The Sampler field on the COC was not filled out. The client was notified on 8/1/17.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample MW-19 (280-99776-1) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 08/10/2017.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Methylene Chloride were detected in method blank MB 280-383790/9 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

4-Bromofluorobenzene (Surr) failed the surrogate recovery criteria high for MW-19 (280-99776-1). This sample did not contain any target analytes above the RL; therefore, re-extraction and/or re-analysis was not performed.

The continuing calibration verification (CCV) associated with batch 383790 recovered above the upper control limit for Dichlorodifluoromethane. The samples associated with this CCV were non-detect for the affected analyte; therefore, the data have been reported.

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

TOTAL MERCURY (CVAA)

Sample MW-19 (280-99776-1) was analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 08/02/2017.

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

TOTAL CYANIDE

Sample MW-19 (280-99776-1) was analyzed for total cyanide in accordance with EPA SW-846 Method 9012A. The samples were prepared and analyzed on 08/09/2017.

Job ID: 280-99776-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

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

Detection Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Client Sample ID: MW-19

Lab Sample ID: 280-99776-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.60	J	1.0	0.16	ug/L	1		8260B	Total/NA
Methylene Chloride	0.89	J B	2.0	0.32	ug/L	1		8260B	Total/NA
Cyanide, Total	0.0026	J	0.010	0.0020	mg/L	1		9012A	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
245.1	Mercury (CVAA)	EPA	TAL DEN
9012A	Cyanide, Total and/or Amenable	SW846	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-99776-1	MW-19	Water	07/28/17 16:30	08/01/17 13:00

Client Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: MW-19
Date Collected: 07/28/17 16:30
Date Received: 08/01/17 13:00

Lab Sample ID: 280-99776-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/10/17 16:05	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/10/17 16:05	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/10/17 16:05	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/10/17 16:05	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/10/17 16:05	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/10/17 16:05	1
1,1-Dichloropropene	ND		1.0	0.19	ug/L			08/10/17 16:05	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			08/10/17 16:05	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/10/17 16:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			08/10/17 16:05	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			08/10/17 16:05	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/10/17 16:05	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/10/17 16:05	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/10/17 16:05	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/10/17 16:05	1
1,2-Dichloroethene, Total	ND		1.0	0.24	ug/L			08/10/17 16:05	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/10/17 16:05	1
1,3,5-Trimethylbenzene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			08/10/17 16:05	1
1,3-Dichloropropane	ND		1.0	0.22	ug/L			08/10/17 16:05	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
2,2-Dichloropropane	ND		1.0	0.18	ug/L			08/10/17 16:05	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/10/17 16:05	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			08/10/17 16:05	1
2-Hexanone	ND		5.0	1.7	ug/L			08/10/17 16:05	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			08/10/17 16:05	1
4-Isopropyltoluene	ND		1.0	0.20	ug/L			08/10/17 16:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/10/17 16:05	1
Acetone	ND		10	1.9	ug/L			08/10/17 16:05	1
Benzene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
Bromobenzene	ND		1.0	0.17	ug/L			08/10/17 16:05	1
Bromoform	ND		1.0	0.19	ug/L			08/10/17 16:05	1
Bromomethane	ND		2.0	0.21	ug/L			08/10/17 16:05	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/10/17 16:05	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/10/17 16:05	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/10/17 16:05	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/10/17 16:05	1
Chloroethane	ND		2.0	0.41	ug/L			08/10/17 16:05	1
Chloroform	**0.60**	**J**	1.0	0.16	ug/L			08/10/17 16:05	1
Chloromethane	ND		2.0	0.30	ug/L			08/10/17 16:05	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/10/17 16:05	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
Dibromomethane	ND		1.0	0.17	ug/L			08/10/17 16:05	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/10/17 16:05	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			08/10/17 16:05	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
Hexachlorobutadiene	ND		1.0	0.36	ug/L			08/10/17 16:05	1
Isopropylbenzene	ND		1.0	0.19	ug/L			08/10/17 16:05	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			08/10/17 16:05	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: MW-19
Date Collected: 07/28/17 16:30
Date Received: 08/01/17 13:00

Lab Sample ID: 280-99776-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	0.89	J B	2.0	0.32	ug/L			08/10/17 16:05	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/10/17 16:05	1
Naphthalene	ND		1.0	0.22	ug/L			08/10/17 16:05	1
n-Butylbenzene	ND		1.0	0.32	ug/L			08/10/17 16:05	1
N-Propylbenzene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
o-Xylene	ND		1.0	0.19	ug/L			08/10/17 16:05	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			08/10/17 16:05	1
Styrene	ND		1.0	0.17	ug/L			08/10/17 16:05	1
tert-Butylbenzene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/10/17 16:05	1
Toluene	ND		1.0	0.17	ug/L			08/10/17 16:05	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/10/17 16:05	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/10/17 16:05	1
Trichloroethene	ND		1.0	0.16	ug/L			08/10/17 16:05	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			08/10/17 16:05	1
Vinyl chloride	ND		1.0	0.10	ug/L			08/10/17 16:05	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/10/17 16:05	1
Tetrahydrofuran	ND		7.0	2.0	ug/L			08/10/17 16:05	1
Freon 113	ND		3.0	0.42	ug/L			08/10/17 16:05	1
Acetonitrile	ND		30	9.6	ug/L			08/10/17 16:05	1
2-Pentanone	ND		5.0	1.0	ug/L			08/10/17 16:05	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			08/10/17 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 127*		*08/10/17 16:05*	*1*
4-Bromofluorobenzene (Surr)	*121*	*X*	*78 - 120*		*08/10/17 16:05*	*1*
Dibromofluoromethane (Surr)	*106*		*77 - 120*		*08/10/17 16:05*	*1*
Toluene-d8 (Surr)	*91*		*80 - 125*		*08/10/17 16:05*	*1*

Method: 245.1 - Mercury (CVAA)

Client Sample ID: MW-19
Date Collected: 07/28/17 16:30
Date Received: 08/01/17 13:00

Lab Sample ID: 280-99776-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		08/02/17 11:52	08/02/17 15:52	1

General Chemistry

Client Sample ID: MW-19
Date Collected: 07/28/17 16:30
Date Received: 08/01/17 13:00

Lab Sample ID: 280-99776-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0026	J	0.010	0.0020	mg/L		08/09/17 06:07	08/09/17 12:02	1

Surrogate Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (70-127)	BFB (78-120)	DBFM (77-120)	TOL (80-125)
280-99776-1	MW-19	99	121 X	106	91
LCS 280-383790/5	Lab Control Sample	87	104	91	85
MB 280-383790/9	Method Blank	87	107	96	88

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

QC Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-383790/9
Matrix: Water
Analysis Batch: 383790

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/10/17 11:20	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			08/10/17 11:20	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			08/10/17 11:20	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			08/10/17 11:20	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			08/10/17 11:20	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			08/10/17 11:20	1
1,1-Dichloropropene	ND		1.0	0.19	ug/L			08/10/17 11:20	1
1,2,3-Trichlorobenzene	0.429	J	1.0	0.21	ug/L			08/10/17 11:20	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			08/10/17 11:20	1
1,2,4-Trichlorobenzene	0.440	J	1.0	0.21	ug/L			08/10/17 11:20	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			08/10/17 11:20	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			08/10/17 11:20	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			08/10/17 11:20	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			08/10/17 11:20	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			08/10/17 11:20	1
1,2-Dichloroethene, Total	ND		1.0	0.24	ug/L			08/10/17 11:20	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			08/10/17 11:20	1
1,3,5-Trimethylbenzene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			08/10/17 11:20	1
1,3-Dichloropropane	ND		1.0	0.22	ug/L			08/10/17 11:20	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
2,2-Dichloropropane	ND		1.0	0.18	ug/L			08/10/17 11:20	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			08/10/17 11:20	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			08/10/17 11:20	1
2-Hexanone	ND		5.0	1.7	ug/L			08/10/17 11:20	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			08/10/17 11:20	1
4-Isopropyltoluene	ND		1.0	0.20	ug/L			08/10/17 11:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			08/10/17 11:20	1
Acetone	ND		10	1.9	ug/L			08/10/17 11:20	1
Benzene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
Bromobenzene	ND		1.0	0.17	ug/L			08/10/17 11:20	1
Bromoform	ND		1.0	0.19	ug/L			08/10/17 11:20	1
Bromomethane	ND		2.0	0.21	ug/L			08/10/17 11:20	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			08/10/17 11:20	1
Chlorobenzene	ND		1.0	0.17	ug/L			08/10/17 11:20	1
Chlorobromomethane	ND		1.0	0.10	ug/L			08/10/17 11:20	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			08/10/17 11:20	1
Chloroethane	ND		2.0	0.41	ug/L			08/10/17 11:20	1
Chloroform	ND		1.0	0.16	ug/L			08/10/17 11:20	1
Chloromethane	ND		2.0	0.30	ug/L			08/10/17 11:20	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/10/17 11:20	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
Dibromomethane	ND		1.0	0.17	ug/L			08/10/17 11:20	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			08/10/17 11:20	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			08/10/17 11:20	1
Ethylbenzene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
Hexachlorobutadiene	ND		1.0	0.36	ug/L			08/10/17 11:20	1
Isopropylbenzene	ND		1.0	0.19	ug/L			08/10/17 11:20	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-383790/9
Matrix: Water
Analysis Batch: 383790

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			08/10/17 11:20	1
Methylene Chloride	0.426	J	2.0	0.32	ug/L			08/10/17 11:20	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			08/10/17 11:20	1
Naphthalene	ND		1.0	0.22	ug/L			08/10/17 11:20	1
n-Butylbenzene	ND		1.0	0.32	ug/L			08/10/17 11:20	1
N-Propylbenzene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
o-Xylene	ND		1.0	0.19	ug/L			08/10/17 11:20	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			08/10/17 11:20	1
Styrene	ND		1.0	0.17	ug/L			08/10/17 11:20	1
tert-Butylbenzene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
Tetrachloroethene	ND		1.0	0.20	ug/L			08/10/17 11:20	1
Toluene	ND		1.0	0.17	ug/L			08/10/17 11:20	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			08/10/17 11:20	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			08/10/17 11:20	1
Trichloroethene	ND		1.0	0.16	ug/L			08/10/17 11:20	1
Trichlorofluoromethane	ND		2.0	0.29	ug/L			08/10/17 11:20	1
Vinyl chloride	ND		1.0	0.10	ug/L			08/10/17 11:20	1
Xylenes, Total	ND		2.0	0.19	ug/L			08/10/17 11:20	1
Tetrahydrofuran	ND		7.0	2.0	ug/L			08/10/17 11:20	1
Freon 113	ND		3.0	0.42	ug/L			08/10/17 11:20	1
Acetonitrile	ND		30	9.6	ug/L			08/10/17 11:20	1
2-Pentanone	ND		5.0	1.0	ug/L			08/10/17 11:20	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			08/10/17 11:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 127*		*08/10/17 11:20*	*1*
4-Bromofluorobenzene (Surr)	*107*		*78 - 120*		*08/10/17 11:20*	*1*
Dibromofluoromethane (Surr)	*96*		*77 - 120*		*08/10/17 11:20*	*1*
Toluene-d8 (Surr)	*88*		*80 - 125*		*08/10/17 11:20*	*1*

Lab Sample ID: LCS 280-383790/5
Matrix: Water
Analysis Batch: 383790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.21		ug/L		104	65 - 135
1,1,1-Trichloroethane	5.00	5.81		ug/L		116	65 - 135
1,1,2,2-Tetrachloroethane	5.00	4.45		ug/L		89	58 - 135
1,1,2-Trichloroethane	5.00	5.03		ug/L		101	64 - 135
1,1-Dichloroethane	5.00	5.18		ug/L		104	65 - 135
1,1-Dichloroethene	5.00	5.40		ug/L		108	65 - 136
1,1-Dichloropropene	5.00	5.43		ug/L		109	65 - 135
1,2,3-Trichlorobenzene	5.00	4.41		ug/L		88	60 - 135
1,2,3-Trichloropropane	5.00	4.74		ug/L		95	65 - 135
1,2,4-Trichlorobenzene	5.00	4.19		ug/L		84	58 - 135
1,2,4-Trimethylbenzene	5.00	5.31		ug/L		106	65 - 135
1,2-Dibromo-3-Chloropropane	5.00	4.11	J	ug/L		82	57 - 135
1,2-Dibromoethane	5.00	4.43		ug/L		89	65 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-383790/5
Matrix: Water
Analysis Batch: 383790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichlorobenzene	5.00	4.74		ug/L		95	65 - 135
1,2-Dichloroethane	5.00	5.11		ug/L		102	65 - 135
1,2-Dichloroethene, Total	10.0	11.0		ug/L		110	65 - 135
1,2-Dichloropropane	5.00	5.01		ug/L		100	64 - 135
1,3,5-Trimethylbenzene	5.00	5.07		ug/L		101	65 - 135
1,3-Dichlorobenzene	5.00	4.74		ug/L		95	65 - 135
1,3-Dichloropropane	5.00	4.41		ug/L		88	64 - 135
1,4-Dichlorobenzene	5.00	4.55		ug/L		91	65 - 135
2,2-Dichloropropane	5.00	5.82		ug/L		116	65 - 135
2-Butanone (MEK)	20.0	18.8		ug/L		94	44 - 177
2-Chlorotoluene	5.00	4.91		ug/L		98	65 - 135
2-Hexanone	20.0	17.1		ug/L		86	57 - 139
4-Chlorotoluene	5.00	4.89		ug/L		98	65 - 135
4-Isopropyltoluene	5.00	4.66		ug/L		93	65 - 135
4-Methyl-2-pentanone (MIBK)	20.0	22.4		ug/L		112	60 - 150
Acetone	20.0	24.0		ug/L		120	39 - 156
Benzene	5.00	5.21		ug/L		104	65 - 135
Bromobenzene	5.00	4.85		ug/L		97	65 - 135
Bromoform	5.00	5.04		ug/L		101	62 - 135
Bromomethane	5.00	6.60		ug/L		132	45 - 135
Carbon tetrachloride	5.00	5.92		ug/L		118	65 - 135
Chlorobenzene	5.00	4.75		ug/L		95	65 - 135
Chlorobromomethane	5.00	5.24		ug/L		105	65 - 135
Chlorodibromomethane	5.00	4.55		ug/L		91	65 - 135
Chloroethane	5.00	6.56		ug/L		131	46 - 136
Chloroform	5.00	5.25		ug/L		105	65 - 135
Chloromethane	5.00	6.84		ug/L		137	34 - 145
cis-1,2-Dichloroethene	5.00	5.37		ug/L		107	65 - 135
cis-1,3-Dichloropropene	5.00	3.96		ug/L		79	65 - 135
Dibromomethane	5.00	5.05		ug/L		101	65 - 135
Dichlorobromomethane	5.00	5.19		ug/L		104	65 - 135
Dichlorodifluoromethane	5.00	6.42		ug/L		128	43 - 142
Ethylbenzene	5.00	4.89		ug/L		98	65 - 135
Hexachlorobutadiene	5.00	4.79		ug/L		96	65 - 135
Isopropylbenzene	5.00	4.60		ug/L		92	65 - 135
Methyl tert-butyl ether	5.00	5.21		ug/L		104	54 - 135
Methylene Chloride	5.00	6.17		ug/L		123	54 - 141
m-Xylene & p-Xylene	5.00	5.04		ug/L		101	65 - 135
Naphthalene	5.00	3.74		ug/L		75	42 - 135
n-Butylbenzene	5.00	4.42		ug/L		88	64 - 135
N-Propylbenzene	5.00	4.88		ug/L		98	65 - 135
o-Xylene	5.00	5.39		ug/L		108	65 - 135
sec-Butylbenzene	5.00	4.78		ug/L		96	64 - 135
Styrene	5.00	5.04		ug/L		101	65 - 135
tert-Butylbenzene	5.00	4.66		ug/L		93	65 - 135
Tetrachloroethene	5.00	4.65		ug/L		93	65 - 135
Toluene	5.00	5.54		ug/L		111	65 - 135
trans-1,2-Dichloroethene	5.00	5.61		ug/L		112	65 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-383790/5
Matrix: Water
Analysis Batch: 383790

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	5.00	5.27		ug/L		105	65 - 135
Trichloroethene	5.00	4.80		ug/L		96	65 - 135
Trichlorofluoromethane	5.00	6.29		ug/L		126	53 - 137
Vinyl chloride	5.00	6.02		ug/L		120	40 - 137
Xylenes, Total	10.0	10.4		ug/L		104	65 - 135
Freon 113	5.00	6.05		ug/L		121	65 - 140
2-Pentanone	20.0	15.1		ug/L		76	24 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 127*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*
Dibromofluoromethane (Surr)	*91*		*77 - 120*
Toluene-d8 (Surr)	*85*		*80 - 125*

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 280-382921/1-A
Matrix: Water
Analysis Batch: 383033

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 382921

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		08/02/17 11:52	08/02/17 15:27	1

Lab Sample ID: LCS 280-382921/2-A
Matrix: Water
Analysis Batch: 383033

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 382921

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.70		ug/L		94	90 - 110

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 280-383626/4-A
Matrix: Water
Analysis Batch: 383699

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 383626

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.010	0.0020	mg/L		08/09/17 06:07	08/09/17 11:44	1

Lab Sample ID: HLCS 280-383626/1-A
Matrix: Water
Analysis Batch: 383699

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 383626

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.350	0.363		mg/L		104	90 - 110

QC Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: LCS 280-383626/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 383699 — **Prep Batch: 383626**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.102		mg/L		102	90 - 110

Lab Sample ID: LLCS 280-383626/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 383699 — **Prep Batch: 383626**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.110		mg/L		110	44 - 167

QC Association Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

GC/MS VOA

Analysis Batch: 383790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99776-1	MW-19	Total/NA	Water	8260B	
MB 280-383790/9	Method Blank	Total/NA	Water	8260B	
LCS 280-383790/5	Lab Control Sample	Total/NA	Water	8260B	

Metals

Prep Batch: 382921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99776-1	MW-19	Total/NA	Water	245.1	
MB 280-382921/1-A	Method Blank	Total/NA	Water	245.1	
LCS 280-382921/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 383033

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99776-1	MW-19	Total/NA	Water	245.1	382921
MB 280-382921/1-A	Method Blank	Total/NA	Water	245.1	382921
LCS 280-382921/2-A	Lab Control Sample	Total/NA	Water	245.1	382921

General Chemistry

Prep Batch: 383626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99776-1	MW-19	Total/NA	Water	9012A	
MB 280-383626/4-A	Method Blank	Total/NA	Water	9012A	
HLCS 280-383626/1-A	Lab Control Sample	Total/NA	Water	9012A	
LCS 280-383626/3-A	Lab Control Sample	Total/NA	Water	9012A	
LLCS 280-383626/2-A	Lab Control Sample	Total/NA	Water	9012A	

Analysis Batch: 383699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-99776-1	MW-19	Total/NA	Water	9012A	383626
MB 280-383626/4-A	Method Blank	Total/NA	Water	9012A	383626
HLCS 280-383626/1-A	Lab Control Sample	Total/NA	Water	9012A	383626
LCS 280-383626/3-A	Lab Control Sample	Total/NA	Water	9012A	383626
LLCS 280-383626/2-A	Lab Control Sample	Total/NA	Water	9012A	383626

Lab Chronicle

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Client Sample ID: MW-19

Date Collected: 07/28/17 16:30
Date Received: 08/01/17 13:00

Lab Sample ID: 280-99776-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	383790	08/10/17 16:05	JLS	TAL DEN
Total/NA	Prep	245.1			30 mL	50 mL	382921	08/02/17 11:52	CDH	TAL DEN
Total/NA	Analysis	245.1		1			383033	08/02/17 15:52	CDH	TAL DEN
Total/NA	Prep	9012A			50 mL	50 mL	383626	08/09/17 06:07	JML	TAL DEN
Total/NA	Analysis	9012A		1	50 mL	50 mL	383699	08/09/17 12:02	JML	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-99776-1

Laboratory: TestAmerica Denver

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	DoD ELAP		2907.01	10-31-17
A2LA	ISO/IEC 17025		2907.01	10-31-17
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-18
Arizona	State Program	9	AZ0713	12-20-17
Arkansas DEQ	State Program	6	88-0687	06-01-18
California	State Program	9	2513	01-08-18
Connecticut	State Program	1	PH-0686	09-30-18
Florida	NELAP	4	E87667	06-30-18
Georgia	State Program	4	N/A	01-08-18
Illinois	NELAP	5	200017	04-30-18
Iowa	State Program	7	370	12-01-18
Kansas	NELAP	7	E-10166	04-30-18
Louisiana	NELAP	6	02096	06-30-18
Maine	State Program	1	CO0002	03-03-19
Minnesota	NELAP	5	8-999-405	12-31-17
Nevada	State Program	9	CO0026	07-31-18
New Hampshire	NELAP	1	205310	04-28-18
New Jersey	NELAP	2	CO004	06-30-18
New York	NELAP	2	11964	04-01-18
North Carolina (WW/SW)	State Program	4	358	12-31-17
North Dakota	State Program	8	R-034	01-09-18
Oklahoma	State Program	6	8614	08-31-17
Oregon	NELAP	10	4025	01-08-18
Pennsylvania	NELAP	3	68-00664	07-31-18
South Carolina	State Program	4	72002001	01-08-18
Texas	NELAP	6	T104704183-16-12	09-30-17
USDA	Federal		P330-16-00397	12-15-19
Utah	NELAP	8	CO00026	07-31-17 *
Virginia	NELAP	3	460232	06-14-18
Washington	State Program	10	C583	08-03-18
West Virginia DEP	State Program	3	354	11-30-17
Wisconsin	State Program	5	999615430	08-31-17
Wyoming (UST)	A2LA	8	2907.01	10-31-17

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

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, LLC.
2600 Canton Ct, Unit C, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

Batch:

PAGE ____ OF ____

Client No.
LAB

CLIENT: **Stewart Environmental**

SAMPLER
Print:
Signature:

Sample No.	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	Chlorine (ppm) if applicable	SAMPLE IDENTIFICATION / NAME	Matrix Type	QC Report Needed	Total No. of Bottles	Analyses Requested
	4/28	16:30			4W-19	WW		5	Cyanide, Hg 8260B Including: 1,1-DCE; Freon-11; Freon-113; Trans 1,2-DCE; 1,1-DCA; Cis-1,2-DCE; Chloroform; 2-Butanone (MEK); 4-Isopropyltoluene; 1,1,1-TCA; Trichloroethelene (TCE); Toluene; tetrachloroethylene (Perc); tetrahydrofuran (THF); vinyl chloride; total xylenes; benzene; Acetonitrile (Methyl Cyanide); Ethyl Methacrylate; 2-Pentanone, 4-Methanone

280-99776 Chain of Custody

Notes: S.4400 IR#7 transferred by JT 8/1/17

Relinquished by	Date / Time	Received by	Date / Time
TL	8/1/17 15:00	[illegible]	8/1/17 1300
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By		Date	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = liquid W = water
S = soil SL = sludge
A = Air SD = Solid

____ CDPHE REPORT REQUIRED

PWSID #

REPORT TO: Trevor Mueller
PHONE: 970.226.5500 FAX:
E-MAIL: Lab@stewartenv.com
CLIENT:
ADDRESS: 2600 Canton Ct, Suite C
CITY, STATE, ZIP: Fort Collins, CO 80525
INVOICE TO:
ADDRESS:
CITY, STATE, ZIP:

Login Sample Receipt Checklist

Client: Stewart Environmental Consultants Inc

Job Number: 280-99776-1

Login Number: 99776
List Number: 1
Creator: True, Joshua A

List Source: TestAmerica Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
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?	False	Refer to Job Narrative for details.
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-100568-2
Client Project/Site: Analytical Testing

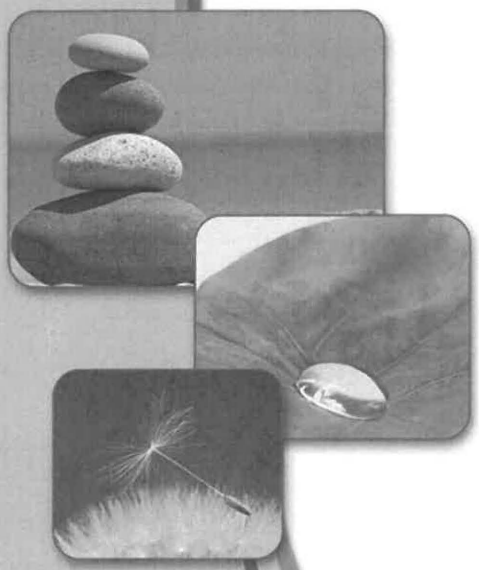
For:
Stewart Environmental Consultants Inc
748 Whalers Way
Unit 210
Fort Collins, Colorado 80525

Attn: Mr. Trevor Mueller

Stephanie Rothmeyer

Authorized for release by:
9/20/2017 5:10:46 PM

Stephanie Rothmeyer, Project Manager I
(303)736-0182
stephanie.rothmeyer@testamericainc.com



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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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)

Job ID: 280-100568-2

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Stewart Environmental Consultants Inc

Project: Analytical Testing

Report Number: 280-100568-2

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

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

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 8/24/2017 at 2:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 7.7° C.

The following sample was received at the laboratory outside the required temperature criteria: Q MW-12 (280-100568-2). The sample was received with insufficient ice at a temperature of 7.7 C. The client was notified on 8/25/17.

The Chain-of-Custody (COC) was incomplete as received. The Relinquished by field on the first page of the COC was not filled out. The client was notified on 8/25/17.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Sample Q MW-12 (280-100568-2) was analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 09/06/2017.

The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs); however, when verified by the laboratory, the pH was greater than 2 and the following sample was analyzed after 7 days from sampling: Q MW-12 (280-100568-2).

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

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Sample Q MW-12 (280-100568-2) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 08/27/2017 and analyzed on 08/30/2017.

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

TOTAL MERCURY (CVAA)
Sample Q MW-12 (280-100568-2) was analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 08/28/2017.

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

TOTAL CYANIDE
Sample Q MW-12 (280-100568-2) was analyzed for total cyanide in accordance with EPA Method 335.4. The samples were prepared and analyzed on 08/31/2017.

Job ID: 280-100568-2 (Continued)

Laboratory: TestAmerica Denver (Continued)

Cyanide, Total was detected in method blank MB 280-386220/4-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Cyanide, Total failed the recovery criteria low for the MS and MSD of sample 280-100696-3 in batch 280-386301. Refer to the QC report for details.

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

TOTAL KJELDAHL NITROGEN
Sample Q MW-12 (280-100568-2) was analyzed for total kjeldahl nitrogen in accordance with EPA Method 351.2. The samples were prepared on 08/29/2017 and analyzed on 08/30/2017.

Nitrogen, Kjeldahl was detected in method blank MB 280-386047/2-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

TOTAL PHOSPHORUS
Sample Q MW-12 (280-100568-2) was analyzed for total phosphorus in accordance with EPA Method 365.1. The samples were prepared on 08/28/2017 and analyzed on 08/29/2017.

Phosphorus, Total was detected in method blank MB 280-385799/5-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

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

TOTAL RECOVERABLE PHENOLS
Sample Q MW-12 (280-100568-2) was analyzed for total recoverable phenols in accordance with EPA Method 420.4. The samples were prepared and analyzed on 08/30/2017.

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

TOTAL ORGANIC CARBON
Sample Q MW-12 (280-100568-2) was analyzed for total organic carbon in accordance with SM20 5310B. The samples were analyzed on 08/28/2017.

The following sample was received with insufficient preservation: Q MW-12 (280-100568-2). The sample was in a sulfuric preserved bottle with pH 3. It was preserved at the bench and analyzed.

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

Detection Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Client Sample ID: Q MW-12 — Lab Sample ID: 280-100568-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diethyl phthalate	0.37	J	3.9	0.37	ug/L	1		8270C	Total/NA
Mercury	0.060	J	0.20	0.027	ug/L	1		245.1	Total/NA
Cyanide, Total	0.014	B	0.010	0.0020	mg/L	1		335.4	Total/NA
Nitrogen, Kjeldahl	0.55	J B	1.0	0.18	mg/L	1		351.2	Total/NA
Phosphorus, Total	0.20	B	0.050	0.0050	mg/L	1		365.1	Total/NA
Total Organic Carbon - Quad	20		1.0	0.16	mg/L	1		SM 5310B	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL DEN
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL DEN
245.1	Mercury (CVAA)	EPA	TAL DEN
335.4	Cyanide, Total	MCAWW	TAL DEN
351.2	Nitrogen, Total Kjeldahl	MCAWW	TAL DEN
365.1	Phosphorus, Total	EPA	TAL DEN
420.4	Phenolics, Total Recoverable	MCAWW	TAL DEN
SM 5310B	Organic Carbon, Total (TOC)	SM	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-100568-2	Q MW-12	Water	08/23/17 15:00	08/24/17 14:15

Client Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Client Sample ID: Q MW-12
Date Collected: 08/23/17 15:00
Date Received: 08/24/17 14:15

Lab Sample ID: 280-100568-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/06/17 08:30	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			09/06/17 08:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/06/17 08:30	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			09/06/17 08:30	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/06/17 08:30	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			09/06/17 08:30	1
1,1-Dichloropropene	ND		1.0	0.19	ug/L			09/06/17 08:30	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			09/06/17 08:30	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			09/06/17 08:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			09/06/17 08:30	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			09/06/17 08:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			09/06/17 08:30	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			09/06/17 08:30	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			09/06/17 08:30	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			09/06/17 08:30	1
1,2-Dichloroethene, Total	ND		1.0	0.24	ug/L			09/06/17 08:30	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/06/17 08:30	1
1,3,5-Trimethylbenzene	ND		1.0	0.16	ug/L			09/06/17 08:30	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			09/06/17 08:30	1
1,3-Dichloropropane	ND		1.0	0.22	ug/L			09/06/17 08:30	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			09/06/17 08:30	1
2,2-Dichloropropane	ND		1.0	0.18	ug/L			09/06/17 08:30	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			09/06/17 08:30	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			09/06/17 08:30	1
2-Hexanone	ND		5.0	1.7	ug/L			09/06/17 08:30	1
2-Pentanone	ND		5.0	1.0	ug/L			09/06/17 08:30	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			09/06/17 08:30	1
4-Isopropyltoluene	ND		1.0	0.20	ug/L			09/06/17 08:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			09/06/17 08:30	1
Acetone	ND		10	1.9	ug/L			09/06/17 08:30	1
Acetonitrile	ND		30	9.6	ug/L			09/06/17 08:30	1
Benzene	ND		1.0	0.16	ug/L			09/06/17 08:30	1
Bromobenzene	ND		1.0	0.17	ug/L			09/06/17 08:30	1
Bromoform	ND		1.0	0.19	ug/L			09/06/17 08:30	1
Bromomethane	ND		2.0	0.21	ug/L			09/06/17 08:30	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			09/06/17 08:30	1
Chlorobenzene	ND		1.0	0.17	ug/L			09/06/17 08:30	1
Chlorobromomethane	ND		1.0	0.10	ug/L			09/06/17 08:30	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			09/06/17 08:30	1
Chloroethane	ND		2.0	0.41	ug/L			09/06/17 08:30	1
Chloroform	ND		1.0	0.16	ug/L			09/06/17 08:30	1
Chloromethane	ND		2.0	0.30	ug/L			09/06/17 08:30	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			09/06/17 08:30	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			09/06/17 08:30	1
Dibromomethane	ND		1.0	0.17	ug/L			09/06/17 08:30	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			09/06/17 08:30	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			09/06/17 08:30	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			09/06/17 08:30	1
Ethylbenzene	ND		1.0	0.16	ug/L			09/06/17 08:30	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Q MW-12
Date Collected: 08/23/17 15:00
Date Received: 08/24/17 14:15

Lab Sample ID: 280-100568-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Freon 113	ND		3.0	0.42	ug/L			09/06/17 08:30	1
Freon-11	ND		2.0	0.29	ug/L			09/06/17 08:30	1
Hexachlorobutadiene	ND		1.0	0.36	ug/L			09/06/17 08:30	1
Isopropylbenzene	ND		1.0	0.19	ug/L			09/06/17 08:30	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			09/06/17 08:30	1
Methylene Chloride	ND		2.0	0.32	ug/L			09/06/17 08:30	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			09/06/17 08:30	1
Naphthalene	ND		1.0	0.22	ug/L			09/06/17 08:30	1
n-Butylbenzene	ND		1.0	0.32	ug/L			09/06/17 08:30	1
N-Propylbenzene	ND		1.0	0.16	ug/L			09/06/17 08:30	1
o-Xylene	ND		1.0	0.19	ug/L			09/06/17 08:30	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/06/17 08:30	1
Styrene	ND		1.0	0.17	ug/L			09/06/17 08:30	1
tert-Butylbenzene	ND		1.0	0.16	ug/L			09/06/17 08:30	1
Tetrachloroethene	ND		1.0	0.20	ug/L			09/06/17 08:30	1
Toluene	ND		1.0	0.17	ug/L			09/06/17 08:30	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			09/06/17 08:30	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			09/06/17 08:30	1
Trichloroethene	ND		1.0	0.16	ug/L			09/06/17 08:30	1
Vinyl chloride	ND		1.0	0.10	ug/L			09/06/17 08:30	1
Xylenes, Total	ND		2.0	0.19	ug/L			09/06/17 08:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 127*		*09/06/17 08:30*	*1*
4-Bromofluorobenzene (Surr)	*97*		*78 - 120*		*09/06/17 08:30*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*09/06/17 08:30*	*1*
Toluene-d8 (Surr)	*104*		*80 - 125*		*09/06/17 08:30*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Client Sample ID: Q MW-12
Date Collected: 08/23/17 15:00
Date Received: 08/24/17 14:15

Lab Sample ID: 280-100568-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		3.9	0.27	ug/L		08/27/17 08:32	08/30/17 16:34	1
1,2-Dichlorobenzene	ND		3.9	0.22	ug/L		08/27/17 08:32	08/30/17 16:34	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		9.6	0.22	ug/L		08/27/17 08:32	08/30/17 16:34	1
1,3-Dichlorobenzene	ND		9.6	0.29	ug/L		08/27/17 08:32	08/30/17 16:34	1
1,4-Dioxane	ND		19	1.6	ug/L		08/27/17 08:32	08/30/17 16:34	1
2,4,6-Trichlorophenol	ND		9.6	0.28	ug/L		08/27/17 08:32	08/30/17 16:34	1
2,4-Dichlorophenol	ND		9.6	0.62	ug/L		08/27/17 08:32	08/30/17 16:34	1
2,4-Dimethylphenol	ND		9.6	0.56	ug/L		08/27/17 08:32	08/30/17 16:34	1
2,4-Dinitrophenol	ND		29	9.6	ug/L		08/27/17 08:32	08/30/17 16:34	1
2,4-Dinitrotoluene	ND		9.6	1.6	ug/L		08/27/17 08:32	08/30/17 16:34	1
2,6-Dinitrotoluene	ND		9.6	1.8	ug/L		08/27/17 08:32	08/30/17 16:34	1
2-Chloronaphthalene	ND		3.9	0.25	ug/L		08/27/17 08:32	08/30/17 16:34	1
2-Chlorophenol	ND		9.6	1.9	ug/L		08/27/17 08:32	08/30/17 16:34	1
2-Methylphenol	ND		9.6	0.94	ug/L		08/27/17 08:32	08/30/17 16:34	1
3,3'-Dichlorobenzidine	ND		48	1.9	ug/L		08/27/17 08:32	08/30/17 16:34	1

Client Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Client Sample ID: Q MW-12
Date Collected: 08/23/17 15:00
Date Received: 08/24/17 14:15

Lab Sample ID: 280-100568-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		48	3.9	ug/L		08/27/17 08:32	08/30/17 16:34	1
4-Nitrophenol	ND		9.6	1.2	ug/L		08/27/17 08:32	08/30/17 16:34	1
Acenaphthene	ND		3.9	0.27	ug/L		08/27/17 08:32	08/30/17 16:34	1
Acenaphthylene	ND		3.9	0.47	ug/L		08/27/17 08:32	08/30/17 16:34	1
Anthracene	ND		3.9	0.40	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzidine	ND		96	48	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzo[a]anthracene	ND		3.9	0.34	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzo[a]pyrene	ND		3.9	0.30	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzo[b]fluoranthene	ND		3.9	0.51	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzo[g,h,i]perylene	ND		3.9	0.48	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzo[k]fluoranthene	ND		3.9	0.44	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzoic acid	ND		24	9.6	ug/L		08/27/17 08:32	08/30/17 16:34	1
Benzyl alcohol	ND		9.6	0.22	ug/L		08/27/17 08:32	08/30/17 16:34	1
bis (2-chloroisopropyl) ether	ND		9.6	0.27	ug/L		08/27/17 08:32	08/30/17 16:34	1
Bis(2-chloroethyl)ether	ND		9.6	0.40	ug/L		08/27/17 08:32	08/30/17 16:34	1
Bis(2-ethylhexyl) phthalate	ND		9.6	0.54	ug/L		08/27/17 08:32	08/30/17 16:34	1
Butyl benzyl phthalate	ND		3.9	0.96	ug/L		08/27/17 08:32	08/30/17 16:34	1
Chrysene	ND		3.9	0.52	ug/L		08/27/17 08:32	08/30/17 16:34	1
Dibenz(a,h)anthracene	ND		3.9	0.49	ug/L		08/27/17 08:32	08/30/17 16:34	1
Diethyl phthalate	**0.37**	**J**	3.9	0.37	ug/L		08/27/17 08:32	08/30/17 16:34	1
Dimethyl phthalate	ND		3.9	0.20	ug/L		08/27/17 08:32	08/30/17 16:34	1
Di-n-butyl phthalate	ND		3.9	1.1	ug/L		08/27/17 08:32	08/30/17 16:34	1
Di-n-octyl phthalate	ND		3.9	0.34	ug/L		08/27/17 08:32	08/30/17 16:34	1
Fluoranthene	ND		3.9	0.19	ug/L		08/27/17 08:32	08/30/17 16:34	1
Fluorene	ND		3.9	0.30	ug/L		08/27/17 08:32	08/30/17 16:34	1
Hexachlorobenzene	ND		9.6	0.64	ug/L		08/27/17 08:32	08/30/17 16:34	1
Hexachlorobutadiene	ND		9.6	3.2	ug/L		08/27/17 08:32	08/30/17 16:34	1
Hexachlorocyclopentadiene	ND		48	9.6	ug/L		08/27/17 08:32	08/30/17 16:34	1
Hexachloroethane	ND		9.6	2.0	ug/L		08/27/17 08:32	08/30/17 16:34	1
Indeno[1,2,3-cd]pyrene	ND		3.9	0.63	ug/L		08/27/17 08:32	08/30/17 16:34	1
Isophorone	ND		9.6	0.20	ug/L		08/27/17 08:32	08/30/17 16:34	1
Naphthalene	ND		3.9	0.28	ug/L		08/27/17 08:32	08/30/17 16:34	1
Nitrobenzene	ND		9.6	0.78	ug/L		08/27/17 08:32	08/30/17 16:34	1
N-Nitrosodimethylamine	ND		9.6	0.28	ug/L		08/27/17 08:32	08/30/17 16:34	1
N-Nitrosodi-n-propylamine	ND		9.6	0.34	ug/L		08/27/17 08:32	08/30/17 16:34	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		9.6	0.42	ug/L		08/27/17 08:32	08/30/17 16:34	1
Pentachlorophenol	ND		48	19	ug/L		08/27/17 08:32	08/30/17 16:34	1
Phenol	ND		9.6	1.9	ug/L		08/27/17 08:32	08/30/17 16:34	1
Pyrene	ND		9.6	0.36	ug/L		08/27/17 08:32	08/30/17 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*67*		*48 - 135*	*08/27/17 08:32*	*08/30/17 16:34*	*1*
2-Fluorobiphenyl	*62*		*48 - 135*	*08/27/17 08:32*	*08/30/17 16:34*	*1*
2-Fluorophenol	*58*		*41 - 135*	*08/27/17 08:32*	*08/30/17 16:34*	*1*
Nitrobenzene-d5	*62*		*42 - 135*	*08/27/17 08:32*	*08/30/17 16:34*	*1*
Phenol-d5	*60*		*46 - 135*	*08/27/17 08:32*	*08/30/17 16:34*	*1*
Terphenyl-d14	*29*		*20 - 135*	*08/27/17 08:32*	*08/30/17 16:34*	*1*

Client Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method: 245.1 - Mercury (CVAA)

Client Sample ID: Q MW-12
Date Collected: 08/23/17 15:00
Date Received: 08/24/17 14:15

Lab Sample ID: 280-100568-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.060	J	0.20	0.027	ug/L		08/28/17 11:33	08/28/17 17:19	1

General Chemistry

Client Sample ID: Q MW-12
Date Collected: 08/23/17 15:00
Date Received: 08/24/17 14:15

Lab Sample ID: 280-100568-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.014	B	0.010	0.0020	mg/L		08/31/17 05:50	08/31/17 11:40	1
Nitrogen, Kjeldahl	0.55	J B	1.0	0.18	mg/L		08/29/17 23:36	08/30/17 23:49	1
Phosphorus, Total	0.20	B	0.050	0.0050	mg/L		08/28/17 09:58	08/29/17 11:24	1
Phenols, Total	ND		0.010	0.0068	mg/L		08/30/17 06:13	08/30/17 09:50	1
Total Organic Carbon - Quad	20		1.0	0.16	mg/L			08/28/17 12:36	1

Surrogate Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		12DCE	BFB	DBFM	TOL
Lab Sample ID	**Client Sample ID**	(70-127)	(78-120)	(77-120)	(80-125)
280-100568-2	Q MW-12	108	97	101	104
LCS 280-386660/4	Lab Control Sample	109	98	101	102
MB 280-386660/6	Method Blank	109	104	101	100

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPH
Lab Sample ID	**Client Sample ID**	(48-135)	(48-135)	(41-135)	(42-135)	(46-135)	(20-135)
280-100568-2	Q MW-12	67	62	58	62	60	29
LCS 280-385728/2-A	Lab Control Sample	82	74	69	74	71	92
LCSD 280-385728/3-A	Lab Control Sample Dup	83	81	81	81	83	89
MB 280-385728/1-A	Method Blank	76	81	83	88	85	95

Surrogate Legend

TBP = 2,4,6-Tribromophenol
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPH = Terphenyl-d14

QC Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-386660/6
Matrix: Water
Analysis Batch: 386660

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/06/17 07:07	1
1,1,1-Trichloroethane	ND		1.0	0.16	ug/L			09/06/17 07:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			09/06/17 07:07	1
1,1,2-Trichloroethane	ND		1.0	0.27	ug/L			09/06/17 07:07	1
1,1-Dichloroethane	ND		1.0	0.22	ug/L			09/06/17 07:07	1
1,1-Dichloroethene	ND		1.0	0.23	ug/L			09/06/17 07:07	1
1,1-Dichloropropene	ND		1.0	0.19	ug/L			09/06/17 07:07	1
1,2,3-Trichlorobenzene	ND		1.0	0.21	ug/L			09/06/17 07:07	1
1,2,3-Trichloropropane	ND		2.5	0.33	ug/L			09/06/17 07:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.21	ug/L			09/06/17 07:07	1
1,2,4-Trimethylbenzene	ND		1.0	0.15	ug/L			09/06/17 07:07	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.47	ug/L			09/06/17 07:07	1
1,2-Dibromoethane	ND		1.0	0.18	ug/L			09/06/17 07:07	1
1,2-Dichlorobenzene	ND		1.0	0.15	ug/L			09/06/17 07:07	1
1,2-Dichloroethane	ND		1.0	0.13	ug/L			09/06/17 07:07	1
1,2-Dichloroethene, Total	ND		1.0	0.24	ug/L			09/06/17 07:07	1
1,2-Dichloropropane	ND		1.0	0.18	ug/L			09/06/17 07:07	1
1,3,5-Trimethylbenzene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			09/06/17 07:07	1
1,3-Dichloropropane	ND		1.0	0.22	ug/L			09/06/17 07:07	1
1,4-Dichlorobenzene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
2,2-Dichloropropane	ND		1.0	0.18	ug/L			09/06/17 07:07	1
2-Butanone (MEK)	ND		6.0	2.0	ug/L			09/06/17 07:07	1
2-Chlorotoluene	ND		1.0	0.17	ug/L			09/06/17 07:07	1
2-Hexanone	ND		5.0	1.7	ug/L			09/06/17 07:07	1
2-Pentanone	ND		5.0	1.0	ug/L			09/06/17 07:07	1
4-Chlorotoluene	ND		1.0	0.21	ug/L			09/06/17 07:07	1
4-Isopropyltoluene	ND		1.0	0.20	ug/L			09/06/17 07:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	0.98	ug/L			09/06/17 07:07	1
Acetone	ND		10	1.9	ug/L			09/06/17 07:07	1
Acetonitrile	ND		30	9.6	ug/L			09/06/17 07:07	1
Benzene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
Bromobenzene	ND		1.0	0.17	ug/L			09/06/17 07:07	1
Bromoform	ND		1.0	0.19	ug/L			09/06/17 07:07	1
Bromomethane	ND		2.0	0.21	ug/L			09/06/17 07:07	1
Carbon tetrachloride	ND		1.0	0.19	ug/L			09/06/17 07:07	1
Chlorobenzene	ND		1.0	0.17	ug/L			09/06/17 07:07	1
Chlorobromomethane	ND		1.0	0.10	ug/L			09/06/17 07:07	1
Chlorodibromomethane	ND		1.0	0.17	ug/L			09/06/17 07:07	1
Chloroethane	ND		2.0	0.41	ug/L			09/06/17 07:07	1
Chloroform	ND		1.0	0.16	ug/L			09/06/17 07:07	1
Chloromethane	ND		2.0	0.30	ug/L			09/06/17 07:07	1
cis-1,2-Dichloroethene	ND		1.0	0.15	ug/L			09/06/17 07:07	1
cis-1,3-Dichloropropene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
Dibromomethane	ND		1.0	0.17	ug/L			09/06/17 07:07	1
Dichlorobromomethane	ND		1.0	0.17	ug/L			09/06/17 07:07	1
Dichlorodifluoromethane	ND		2.0	0.31	ug/L			09/06/17 07:07	1
Ethyl methacrylate	ND		3.0	0.86	ug/L			09/06/17 07:07	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-386660/6
Matrix: Water
Analysis Batch: 386660

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
Freon 113	ND		3.0	0.42	ug/L			09/06/17 07:07	1
Freon-11	ND		2.0	0.29	ug/L			09/06/17 07:07	1
Hexachlorobutadiene	ND		1.0	0.36	ug/L			09/06/17 07:07	1
Isopropylbenzene	ND		1.0	0.19	ug/L			09/06/17 07:07	1
Methyl tert-butyl ether	ND		5.0	0.25	ug/L			09/06/17 07:07	1
Methylene Chloride	ND		2.0	0.32	ug/L			09/06/17 07:07	1
m-Xylene & p-Xylene	ND		2.0	0.34	ug/L			09/06/17 07:07	1
Naphthalene	ND		1.0	0.22	ug/L			09/06/17 07:07	1
n-Butylbenzene	ND		1.0	0.32	ug/L			09/06/17 07:07	1
N-Propylbenzene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
o-Xylene	ND		1.0	0.19	ug/L			09/06/17 07:07	1
sec-Butylbenzene	ND		1.0	0.17	ug/L			09/06/17 07:07	1
Styrene	ND		1.0	0.17	ug/L			09/06/17 07:07	1
tert-Butylbenzene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
Tetrachloroethene	ND		1.0	0.20	ug/L			09/06/17 07:07	1
Toluene	ND		1.0	0.17	ug/L			09/06/17 07:07	1
trans-1,2-Dichloroethene	ND		1.0	0.15	ug/L			09/06/17 07:07	1
trans-1,3-Dichloropropene	ND		3.0	0.19	ug/L			09/06/17 07:07	1
Trichloroethene	ND		1.0	0.16	ug/L			09/06/17 07:07	1
Vinyl chloride	ND		1.0	0.10	ug/L			09/06/17 07:07	1
Xylenes, Total	ND		2.0	0.19	ug/L			09/06/17 07:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 127*		*09/06/17 07:07*	*1*
4-Bromofluorobenzene (Surr)	*104*		*78 - 120*		*09/06/17 07:07*	*1*
Dibromofluoromethane (Surr)	*101*		*77 - 120*		*09/06/17 07:07*	*1*
Toluene-d8 (Surr)	*100*		*80 - 125*		*09/06/17 07:07*	*1*

Lab Sample ID: LCS 280-386660/4
Matrix: Water
Analysis Batch: 386660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	5.00	5.24		ug/L		105	65 - 135
1,1,1-Trichloroethane	5.00	5.12		ug/L		102	65 - 135
1,1,2,2-Tetrachloroethane	5.00	5.00		ug/L		100	58 - 135
1,1,2-Trichloroethane	5.00	4.83		ug/L		97	64 - 135
1,1-Dichloroethane	5.00	5.40		ug/L		108	65 - 135
1,1-Dichloroethene	5.00	4.88		ug/L		98	65 - 136
1,1-Dichloropropene	5.00	5.43		ug/L		109	65 - 135
1,2,3-Trichlorobenzene	5.00	4.30		ug/L		86	60 - 135
1,2,3-Trichloropropane	5.00	4.72		ug/L		94	65 - 135
1,2,4-Trichlorobenzene	5.00	4.00		ug/L		80	58 - 135
1,2,4-Trimethylbenzene	5.00	5.13		ug/L		103	65 - 135
1,2-Dibromo-3-Chloropropane	5.00	3.49	J	ug/L		70	57 - 135
1,2-Dibromoethane	5.00	4.48		ug/L		90	65 - 135
1,2-Dichlorobenzene	5.00	4.86		ug/L		97	65 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-386660/4
Matrix: Water
Analysis Batch: 386660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	5.00	5.44		ug/L		109	65 - 135
1,2-Dichloroethene, Total	10.0	10.2		ug/L		102	65 - 135
1,2-Dichloropropane	5.00	5.16		ug/L		103	64 - 135
1,3,5-Trimethylbenzene	5.00	5.18		ug/L		104	65 - 135
1,3-Dichlorobenzene	5.00	5.06		ug/L		101	65 - 135
1,3-Dichloropropane	5.00	5.02		ug/L		100	64 - 135
1,4-Dichlorobenzene	5.00	5.11		ug/L		102	65 - 135
2,2-Dichloropropane	5.00	4.68		ug/L		94	65 - 135
2-Butanone (MEK)	20.0	18.4		ug/L		92	44 - 177
2-Chlorotoluene	5.00	5.30		ug/L		106	65 - 135
2-Hexanone	20.0	15.0		ug/L		75	57 - 139
2-Pentanone	20.0	20.8		ug/L		104	24 - 135
4-Chlorotoluene	5.00	4.97		ug/L		99	65 - 135
4-Isopropyltoluene	5.00	4.93		ug/L		99	65 - 135
4-Methyl-2-pentanone (MIBK)	20.0	16.1		ug/L		81	60 - 150
Acetone	20.0	20.0		ug/L		100	39 - 156
Benzene	5.00	5.22		ug/L		104	65 - 135
Bromobenzene	5.00	5.00		ug/L		100	65 - 135
Bromoform	5.00	3.99		ug/L		80	62 - 135
Bromomethane	5.00	4.51		ug/L		90	45 - 135
Carbon tetrachloride	5.00	5.08		ug/L		102	65 - 135
Chlorobenzene	5.00	5.14		ug/L		103	65 - 135
Chlorobromomethane	5.00	4.91		ug/L		98	65 - 135
Chlorodibromomethane	5.00	4.19		ug/L		84	65 - 135
Chloroethane	5.00	4.43		ug/L		89	46 - 136
Chloroform	5.00	5.33		ug/L		107	65 - 135
Chloromethane	5.00	3.82		ug/L		76	34 - 145
cis-1,2-Dichloroethene	5.00	5.00		ug/L		100	65 - 135
cis-1,3-Dichloropropene	5.00	4.38		ug/L		88	65 - 135
Dibromomethane	5.00	4.69		ug/L		94	65 - 135
Dichlorobromomethane	5.00	5.12		ug/L		102	65 - 135
Dichlorodifluoromethane	5.00	3.71		ug/L		74	43 - 142
Ethylbenzene	5.00	5.18		ug/L		104	65 - 135
Freon 113	5.00	4.96		ug/L		99	65 - 140
Freon-11	5.00	4.68		ug/L		94	53 - 137
Hexachlorobutadiene	5.00	4.89		ug/L		98	65 - 135
Isopropylbenzene	5.00	4.94		ug/L		99	65 - 135
Methyl tert-butyl ether	5.00	4.58	J	ug/L		92	54 - 135
Methylene Chloride	5.00	5.14		ug/L		103	54 - 141
m-Xylene & p-Xylene	5.00	5.01		ug/L		100	65 - 135
Naphthalene	5.00	3.24		ug/L		65	42 - 135
n-Butylbenzene	5.00	5.20		ug/L		104	64 - 135
N-Propylbenzene	5.00	5.14		ug/L		103	65 - 135
o-Xylene	5.00	5.19		ug/L		104	65 - 135
sec-Butylbenzene	5.00	4.82		ug/L		96	64 - 135
Styrene	5.00	4.73		ug/L		95	65 - 135
tert-Butylbenzene	5.00	4.88		ug/L		98	65 - 135
Tetrachloroethene	5.00	5.08		ug/L		102	65 - 135

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-386660/4
Matrix: Water
Analysis Batch: 386660

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Toluene	5.00	5.06		ug/L		101	65 - 135
trans-1,2-Dichloroethene	5.00	5.23		ug/L		105	65 - 135
trans-1,3-Dichloropropene	5.00	4.47		ug/L		89	65 - 135
Trichloroethene	5.00	4.77		ug/L		95	65 - 135
Vinyl chloride	5.00	4.05		ug/L		81	40 - 137
Xylenes, Total	10.0	10.2		ug/L		102	65 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 127*
4-Bromofluorobenzene (Surr)	*98*		*78 - 120*
Dibromofluoromethane (Surr)	*101*		*77 - 120*
Toluene-d8 (Surr)	*102*		*80 - 125*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 280-385728/1-A
Matrix: Water
Analysis Batch: 386133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 385728

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		4.0	0.28	ug/L		08/27/17 08:32	08/30/17 14:12	1
1,2-Dichlorobenzene	ND		4.0	0.23	ug/L		08/27/17 08:32	08/30/17 14:12	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	0.23	ug/L		08/27/17 08:32	08/30/17 14:12	1
1,3-Dichlorobenzene	ND		10	0.30	ug/L		08/27/17 08:32	08/30/17 14:12	1
1,4-Dioxane	ND		20	1.7	ug/L		08/27/17 08:32	08/30/17 14:12	1
2,4,6-Trichlorophenol	ND		10	0.29	ug/L		08/27/17 08:32	08/30/17 14:12	1
2,4-Dichlorophenol	ND		10	0.64	ug/L		08/27/17 08:32	08/30/17 14:12	1
2,4-Dimethylphenol	ND		10	0.58	ug/L		08/27/17 08:32	08/30/17 14:12	1
2,4-Dinitrophenol	ND		30	10	ug/L		08/27/17 08:32	08/30/17 14:12	1
2,4-Dinitrotoluene	ND		10	1.7	ug/L		08/27/17 08:32	08/30/17 14:12	1
2,6-Dinitrotoluene	ND		10	1.9	ug/L		08/27/17 08:32	08/30/17 14:12	1
2-Chloronaphthalene	ND		4.0	0.26	ug/L		08/27/17 08:32	08/30/17 14:12	1
2-Chlorophenol	ND		10	2.0	ug/L		08/27/17 08:32	08/30/17 14:12	1
2-Methylphenol	ND		10	0.98	ug/L		08/27/17 08:32	08/30/17 14:12	1
3,3'-Dichlorobenzidine	ND		50	2.0	ug/L		08/27/17 08:32	08/30/17 14:12	1
4,6-Dinitro-2-methylphenol	ND		50	4.0	ug/L		08/27/17 08:32	08/30/17 14:12	1
4-Nitrophenol	ND		10	1.2	ug/L		08/27/17 08:32	08/30/17 14:12	1
Acenaphthene	ND		4.0	0.28	ug/L		08/27/17 08:32	08/30/17 14:12	1
Acenaphthylene	ND		4.0	0.49	ug/L		08/27/17 08:32	08/30/17 14:12	1
Anthracene	ND		4.0	0.42	ug/L		08/27/17 08:32	08/30/17 14:12	1
Benzidine	ND		100	50	ug/L		08/27/17 08:32	08/30/17 14:12	1
Benzo[a]anthracene	ND		4.0	0.35	ug/L		08/27/17 08:32	08/30/17 14:12	1
Benzo[a]pyrene	ND		4.0	0.31	ug/L		08/27/17 08:32	08/30/17 14:12	1
Benzo[b]fluoranthene	ND		4.0	0.53	ug/L		08/27/17 08:32	08/30/17 14:12	1
Benzo[g,h,i]perylene	ND		4.0	0.50	ug/L		08/27/17 08:32	08/30/17 14:12	1
Benzo[k]fluoranthene	ND		4.0	0.46	ug/L		08/27/17 08:32	08/30/17 14:12	1
Benzoic acid	ND		25	10	ug/L		08/27/17 08:32	08/30/17 14:12	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 280-385728/1-A
Matrix: Water
Analysis Batch: 386133

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 385728

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzyl alcohol	ND		10	0.23	ug/L		08/27/17 08:32	08/30/17 14:12	1
bis (2-chloroisopropyl) ether	ND		10	0.28	ug/L		08/27/17 08:32	08/30/17 14:12	1
Bis(2-chloroethyl)ether	ND		10	0.41	ug/L		08/27/17 08:32	08/30/17 14:12	1
Bis(2-ethylhexyl) phthalate	ND		10	0.56	ug/L		08/27/17 08:32	08/30/17 14:12	1
Butyl benzyl phthalate	ND		4.0	1.0	ug/L		08/27/17 08:32	08/30/17 14:12	1
Chrysene	ND		4.0	0.54	ug/L		08/27/17 08:32	08/30/17 14:12	1
Dibenz(a,h)anthracene	ND		4.0	0.51	ug/L		08/27/17 08:32	08/30/17 14:12	1
Diethyl phthalate	ND		4.0	0.38	ug/L		08/27/17 08:32	08/30/17 14:12	1
Dimethyl phthalate	ND		4.0	0.21	ug/L		08/27/17 08:32	08/30/17 14:12	1
Di-n-butyl phthalate	ND		4.0	1.2	ug/L		08/27/17 08:32	08/30/17 14:12	1
Di-n-octyl phthalate	ND		4.0	0.35	ug/L		08/27/17 08:32	08/30/17 14:12	1
Fluoranthene	ND		4.0	0.20	ug/L		08/27/17 08:32	08/30/17 14:12	1
Fluorene	ND		4.0	0.31	ug/L		08/27/17 08:32	08/30/17 14:12	1
Hexachlorobenzene	ND		10	0.66	ug/L		08/27/17 08:32	08/30/17 14:12	1
Hexachlorobutadiene	ND		10	3.3	ug/L		08/27/17 08:32	08/30/17 14:12	1
Hexachlorocyclopentadiene	ND		50	10	ug/L		08/27/17 08:32	08/30/17 14:12	1
Hexachloroethane	ND		10	2.1	ug/L		08/27/17 08:32	08/30/17 14:12	1
Indeno[1,2,3-cd]pyrene	ND		4.0	0.65	ug/L		08/27/17 08:32	08/30/17 14:12	1
Isophorone	ND		10	0.21	ug/L		08/27/17 08:32	08/30/17 14:12	1
Naphthalene	ND		4.0	0.29	ug/L		08/27/17 08:32	08/30/17 14:12	1
Nitrobenzene	ND		10	0.81	ug/L		08/27/17 08:32	08/30/17 14:12	1
N-Nitrosodimethylamine	ND		10	0.29	ug/L		08/27/17 08:32	08/30/17 14:12	1
N-Nitrosodi-n-propylamine	ND		10	0.35	ug/L		08/27/17 08:32	08/30/17 14:12	1
n-Nitrosodiphenylamine(as diphenylamine)	ND		10	0.44	ug/L		08/27/17 08:32	08/30/17 14:12	1
Pentachlorophenol	ND		50	20	ug/L		08/27/17 08:32	08/30/17 14:12	1
Phenol	ND		10	2.0	ug/L		08/27/17 08:32	08/30/17 14:12	1
Pyrene	ND		10	0.37	ug/L		08/27/17 08:32	08/30/17 14:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol	*76*		*48 - 135*	*08/27/17 08:32*	*08/30/17 14:12*	*1*
2-Fluorobiphenyl	*81*		*48 - 135*	*08/27/17 08:32*	*08/30/17 14:12*	*1*
2-Fluorophenol	*83*		*41 - 135*	*08/27/17 08:32*	*08/30/17 14:12*	*1*
Nitrobenzene-d5	*88*		*42 - 135*	*08/27/17 08:32*	*08/30/17 14:12*	*1*
Phenol-d5	*85*		*46 - 135*	*08/27/17 08:32*	*08/30/17 14:12*	*1*
Terphenyl-d14	*95*		*20 - 135*	*08/27/17 08:32*	*08/30/17 14:12*	*1*

Lab Sample ID: LCS 280-385728/2-A
Matrix: Water
Analysis Batch: 386133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 385728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	80.0	48.7		ug/L		61	44 - 135
1,2-Dichlorobenzene	80.0	47.5		ug/L		59	42 - 135
1,2-Diphenylhydrazine(as Azobenzene)	80.9	73.0		ug/L		90	65 - 135
1,3-Dichlorobenzene	80.0	45.2		ug/L		56	39 - 135
2,4,6-Trichlorophenol	80.0	70.0		ug/L		87	62 - 135

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-385728/2-A
Matrix: Water
Analysis Batch: 386133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 385728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-Dichlorophenol	80.0	62.8		ug/L		78	62 - 135
2,4-Dimethylphenol	80.0	51.9		ug/L		65	44 - 135
2,4-Dinitrophenol	160	155		ug/L		97	50 - 135
2,4-Dinitrotoluene	80.0	77.9		ug/L		97	65 - 135
2,6-Dinitrotoluene	80.0	74.7		ug/L		93	65 - 135
2-Chloronaphthalene	80.0	59.0		ug/L		74	59 - 135
2-Chlorophenol	80.0	59.3		ug/L		74	58 - 135
2-Methylphenol	80.0	59.2		ug/L		74	62 - 135
3,3'-Dichlorobenzidine	160	148		ug/L		93	18 - 135
4,6-Dinitro-2-methylphenol	160	163		ug/L		102	63 - 135
4-Nitrophenol	160	148		ug/L		93	56 - 135
Acenaphthene	80.0	64.7		ug/L		81	61 - 135
Acenaphthylene	80.0	62.7		ug/L		78	63 - 135
Anthracene	80.0	71.8		ug/L		90	65 - 135
Benzidine	160	ND		ug/L		30	5 - 135
Benzo[a]anthracene	80.0	73.6		ug/L		92	65 - 135
Benzo[a]pyrene	80.0	71.6		ug/L		89	65 - 135
Benzo[b]fluoranthene	80.0	74.4		ug/L		93	65 - 135
Benzo[g,h,i]perylene	80.0	78.0		ug/L		98	65 - 135
Benzo[k]fluoranthene	80.0	78.7		ug/L		98	65 - 135
Benzoic acid	80.0	67.1		ug/L		84	41 - 135
Benzyl alcohol	80.0	62.4		ug/L		78	65 - 135
bis (2-chloroisopropyl) ether	80.0	58.3		ug/L		73	55 - 135
Bis(2-chloroethyl)ether	80.0	64.5		ug/L		81	65 - 135
Bis(2-ethylhexyl) phthalate	80.0	74.9		ug/L		94	65 - 135
Butyl benzyl phthalate	80.0	73.5		ug/L		92	65 - 135
Chrysene	80.0	75.1		ug/L		94	65 - 135
Dibenz(a,h)anthracene	80.0	76.8		ug/L		96	63 - 135
Diethyl phthalate	80.0	75.6		ug/L		94	65 - 135
Dimethyl phthalate	80.0	72.8		ug/L		91	65 - 135
Di-n-butyl phthalate	80.0	73.7		ug/L		92	65 - 135
Di-n-octyl phthalate	80.0	74.3		ug/L		93	65 - 135
Fluoranthene	80.0	71.6		ug/L		90	65 - 135
Fluorene	80.0	66.3		ug/L		83	65 - 135
Hexachlorobenzene	80.0	69.3		ug/L		87	65 - 135
Hexachlorobutadiene	80.0	44.7		ug/L		56	35 - 135
Hexachlorocyclopentadiene	158	46.7	J	ug/L		30	10 - 135
Hexachloroethane	80.0	42.4		ug/L		53	32 - 135
Indeno[1,2,3-cd]pyrene	80.0	75.1		ug/L		94	65 - 135
Isophorone	80.0	62.5		ug/L		78	65 - 135
Naphthalene	80.0	55.0		ug/L		69	56 - 135
Nitrobenzene	80.0	60.8		ug/L		76	65 - 135
N-Nitrosodimethylamine	80.0	58.0		ug/L		73	62 - 150
N-Nitrosodi-n-propylamine	80.0	69.1		ug/L		86	65 - 135
n-Nitrosodiphenylamine(as diphenylamine)	80.0	69.7		ug/L		87	65 - 135
Pentachlorophenol	160	144		ug/L		90	52 - 135
Phenol	80.0	59.7		ug/L		75	61 - 135

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 280-385728/2-A
Matrix: Water
Analysis Batch: 386133

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 385728

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Pyrene	80.0	72.7		ug/L		91	65 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*82*		*48 - 135*
2-Fluorobiphenyl	*74*		*48 - 135*
2-Fluorophenol	*69*		*41 - 135*
Nitrobenzene-d5	*74*		*42 - 135*
Phenol-d5	*71*		*46 - 135*
Terphenyl-d14	*92*		*20 - 135*

Lab Sample ID: LCSD 280-385728/3-A
Matrix: Water
Analysis Batch: 386133

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 385728

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	80.0	58.6		ug/L		73	44 - 135	18	42
1,2-Dichlorobenzene	80.0	56.2		ug/L		70	42 - 135	17	49
1,2-Diphenylhydrazine(as Azobenzene)	80.9	72.3		ug/L		89	65 - 135	1	30
1,3-Dichlorobenzene	80.0	53.3		ug/L		67	39 - 135	17	51
2,4,6-Trichlorophenol	80.0	72.6		ug/L		91	62 - 135	4	30
2,4-Dichlorophenol	80.0	69.2		ug/L		86	62 - 135	10	30
2,4-Dimethylphenol	80.0	55.1		ug/L		69	44 - 135	6	30
2,4-Dinitrophenol	160	158		ug/L		99	50 - 135	2	30
2,4-Dinitrotoluene	80.0	76.8		ug/L		96	65 - 135	2	32
2,6-Dinitrotoluene	80.0	73.7		ug/L		92	65 - 135	1	30
2-Chloronaphthalene	80.0	66.7		ug/L		83	59 - 135	12	30
2-Chlorophenol	80.0	67.3		ug/L		84	58 - 135	13	46
2-Methylphenol	80.0	66.1		ug/L		83	62 - 135	11	40
3,3'-Dichlorobenzidine	160	141		ug/L		88	18 - 135	5	50
4,6-Dinitro-2-methylphenol	160	165		ug/L		103	63 - 135	1	30
4-Nitrophenol	160	148		ug/L		92	56 - 135	0	50
Acenaphthene	80.0	68.1		ug/L		85	61 - 135	5	30
Acenaphthylene	80.0	66.8		ug/L		83	63 - 135	6	30
Anthracene	80.0	72.8		ug/L		91	65 - 135	1	30
Benzidine	160	ND		ug/L		31	5 - 135	1	50
Benzo[a]anthracene	80.0	71.8		ug/L		90	65 - 135	3	30
Benzo[a]pyrene	80.0	70.2		ug/L		88	65 - 135	2	30
Benzo[b]fluoranthene	80.0	72.6		ug/L		91	65 - 135	2	30
Benzo[g,h,i]perylene	80.0	78.1		ug/L		98	65 - 135	0	30
Benzo[k]fluoranthene	80.0	77.0		ug/L		96	65 - 135	2	30
Benzoic acid	80.0	72.6		ug/L		91	41 - 135	8	45
Benzyl alcohol	80.0	70.7		ug/L		88	65 - 135	13	37
bis (2-chloroisopropyl) ether	80.0	68.1		ug/L		85	55 - 135	16	37
Bis(2-chloroethyl)ether	80.0	72.9		ug/L		91	65 - 135	12	41
Bis(2-ethylhexyl) phthalate	80.0	73.9		ug/L		92	65 - 135	1	30
Butyl benzyl phthalate	80.0	73.6		ug/L		92	65 - 135	0	30
Chrysene	80.0	73.4		ug/L		92	65 - 135	2	30

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 280-385728/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386133 — **Prep Batch: 385728**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Dibenz(a,h)anthracene	80.0	75.5		ug/L		94	63 - 135	2	30
Diethyl phthalate	80.0	72.6		ug/L		91	65 - 135	4	30
Dimethyl phthalate	80.0	72.4		ug/L		90	65 - 135	1	30
Di-n-butyl phthalate	80.0	73.5		ug/L		92	65 - 135	0	30
Di-n-octyl phthalate	80.0	72.0		ug/L		90	65 - 135	3	30
Fluoranthene	80.0	72.9		ug/L		91	65 - 135	2	30
Fluorene	80.0	66.3		ug/L		83	65 - 135	0	30
Hexachlorobenzene	80.0	69.4		ug/L		87	65 - 135	0	30
Hexachlorobutadiene	80.0	53.3		ug/L		67	35 - 135	18	47
Hexachlorocyclopentadiene	158	51.1		ug/L		32	10 - 135	9	66
Hexachloroethane	80.0	51.1		ug/L		64	32 - 135	19	53
Indeno[1,2,3-cd]pyrene	80.0	70.9		ug/L		89	65 - 135	6	30
Isophorone	80.0	68.3		ug/L		85	65 - 135	9	30
Naphthalene	80.0	62.0		ug/L		78	56 - 135	12	40
Nitrobenzene	80.0	68.2		ug/L		85	65 - 135	11	39
N-Nitrosodimethylamine	80.0	67.5		ug/L		84	62 - 150	15	36
N-Nitrosodi-n-propylamine	80.0	77.8		ug/L		97	65 - 135	12	30
n-Nitrosodiphenylamine(as diphenylamine)	80.0	71.9		ug/L		90	65 - 135	3	30
Pentachlorophenol	160	150		ug/L		94	52 - 135	4	30
Phenol	80.0	68.1		ug/L		85	61 - 135	13	37
Pyrene	80.0	72.2		ug/L		90	65 - 135	1	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol	*83*		*48 - 135*
2-Fluorobiphenyl	*81*		*48 - 135*
2-Fluorophenol	*81*		*41 - 135*
Nitrobenzene-d5	*81*		*42 - 135*
Phenol-d5	*83*		*46 - 135*
Terphenyl-d14	*89*		*20 - 135*

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 280-385783/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385922 — **Prep Batch: 385783**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.027	ug/L		08/28/17 11:33	08/28/17 16:54	1

Lab Sample ID: LCS 280-385783/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385922 — **Prep Batch: 385783**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	5.00	4.97		ug/L		99	90 - 110

QC Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 280-386220/4-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386301 — **Prep Batch: 386220**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.00212	J	0.010	0.0020	mg/L		08/31/17 05:50	08/31/17 11:32	1

Lab Sample ID: HLCS 280-386220/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386301 — **Prep Batch: 386220**

Analyte	Spike Added	HLCS Result	HLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.350	0.367		mg/L		105	90 - 110

Lab Sample ID: LCS 280-386220/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386301 — **Prep Batch: 386220**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.105	0.107		mg/L		102	90 - 110

Lab Sample ID: LLCS 280-386220/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386301 — **Prep Batch: 386220**

Analyte	Spike Added	LLCS Result	LLCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.100	0.114		mg/L		114	44 - 167

Method: 351.2 - Nitrogen, Total Kjeldahl

Lab Sample ID: MB 280-386047/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386218 — **Prep Batch: 386047**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrogen, Kjeldahl	0.242	J	1.0	0.18	mg/L		08/29/17 23:36	08/30/17 23:45	1

Lab Sample ID: LCS 280-386047/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386218 — **Prep Batch: 386047**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrogen, Kjeldahl	6.00	6.09		mg/L		102	90 - 110

Method: 365.1 - Phosphorus, Total

Lab Sample ID: MB 280-385799/5-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385969 — **Prep Batch: 385799**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phosphorus, Total	0.0170	J	0.050	0.0050	mg/L		08/28/17 09:58	08/29/17 11:24	1

Method: 365.1 - Phosphorus, Total (Continued)

Lab Sample ID: LCS 280-385799/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385969 — **Prep Batch: 385799**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus, Total	0.500	0.528		mg/L		106	90 - 110

Lab Sample ID: LCSD 280-385799/4-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385969 — **Prep Batch: 385799**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phosphorus, Total	0.500	0.527		mg/L		105	90 - 110	0	10

Lab Sample ID: 280-100568-2 MS — **Client Sample ID: Q MW-12**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385969 — **Prep Batch: 385799**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Phosphorus, Total	0.20	B	0.500	0.686		mg/L		97	90 - 110

Lab Sample ID: 280-100568-2 MSD — **Client Sample ID: Q MW-12**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385969 — **Prep Batch: 385799**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phosphorus, Total	0.20	B	0.500	0.658		mg/L		91	90 - 110	4	10

Method: 420.4 - Phenolics, Total Recoverable

Lab Sample ID: MB 280-386052/2-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386135 — **Prep Batch: 386052**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenols, Total	ND		0.010	0.0068	mg/L		08/30/17 06:13	08/30/17 09:26	1

Lab Sample ID: LCS 280-386052/1-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 386135 — **Prep Batch: 386052**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenols, Total	0.202	0.191		mg/L		95	90 - 110

Method: SM 5310B - Organic Carbon, Total (TOC)

Lab Sample ID: MB 280-385927/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 385927

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Quad	ND		1.0	0.16	mg/L			08/28/17 12:02	1

QC Sample Results

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Method: SM 5310B - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: LCS 280-385927/3
Matrix: Water
Analysis Batch: 385927

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Quad	25.0	23.8		mg/L		95	88 - 112

QC Association Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

GC/MS VOA

Analysis Batch: 386660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	8260B	
MB 280-386660/6	Method Blank	Total/NA	Water	8260B	
LCS 280-386660/4	Lab Control Sample	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 385728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	3520C	
MB 280-385728/1-A	Method Blank	Total/NA	Water	3520C	
LCS 280-385728/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 280-385728/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 386133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	8270C	385728
MB 280-385728/1-A	Method Blank	Total/NA	Water	8270C	385728
LCS 280-385728/2-A	Lab Control Sample	Total/NA	Water	8270C	385728
LCSD 280-385728/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	385728

Metals

Prep Batch: 385783

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	245.1	
MB 280-385783/1-A	Method Blank	Total/NA	Water	245.1	
LCS 280-385783/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 385922

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	245.1	385783
MB 280-385783/1-A	Method Blank	Total/NA	Water	245.1	385783
LCS 280-385783/2-A	Lab Control Sample	Total/NA	Water	245.1	385783

General Chemistry

Prep Batch: 385799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	365.2/365.3/365	
MB 280-385799/5-A	Method Blank	Total/NA	Water	365.2/365.3/365	
LCS 280-385799/3-A	Lab Control Sample	Total/NA	Water	365.2/365.3/365	
LCSD 280-385799/4-A	Lab Control Sample Dup	Total/NA	Water	365.2/365.3/365	
280-100568-2 MS	Q MW-12	Total/NA	Water	365.2/365.3/365	
280-100568-2 MSD	Q MW-12	Total/NA	Water	365.2/365.3/365	

Analysis Batch: 385927

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	SM 5310B	
MB 280-385927/4	Method Blank	Total/NA	Water	SM 5310B	
LCS 280-385927/3	Lab Control Sample	Total/NA	Water	SM 5310B	

QC Association Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Analysis Batch: 385969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	365.1	385799
MB 280-385799/5-A	Method Blank	Total/NA	Water	365.1	385799
LCS 280-385799/3-A	Lab Control Sample	Total/NA	Water	365.1	385799
LCSD 280-385799/4-A	Lab Control Sample Dup	Total/NA	Water	365.1	385799
280-100568-2 MS	Q MW-12	Total/NA	Water	365.1	385799
280-100568-2 MSD	Q MW-12	Total/NA	Water	365.1	385799

Prep Batch: 386047

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	351.2	
MB 280-386047/2-A	Method Blank	Total/NA	Water	351.2	
LCS 280-386047/1-A	Lab Control Sample	Total/NA	Water	351.2	

Prep Batch: 386052

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	Distill/Phenol	
MB 280-386052/2-A	Method Blank	Total/NA	Water	Distill/Phenol	
LCS 280-386052/1-A	Lab Control Sample	Total/NA	Water	Distill/Phenol	

Analysis Batch: 386135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	420.4	386052
MB 280-386052/2-A	Method Blank	Total/NA	Water	420.4	386052
LCS 280-386052/1-A	Lab Control Sample	Total/NA	Water	420.4	386052

Analysis Batch: 386218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	351.2	386047
MB 280-386047/2-A	Method Blank	Total/NA	Water	351.2	386047
LCS 280-386047/1-A	Lab Control Sample	Total/NA	Water	351.2	386047

Prep Batch: 386220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	Distill/CN	
MB 280-386220/4-A	Method Blank	Total/NA	Water	Distill/CN	
HLCS 280-386220/1-A	Lab Control Sample	Total/NA	Water	Distill/CN	
LCS 280-386220/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	
LLCS 280-386220/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 386301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-100568-2	Q MW-12	Total/NA	Water	335.4	386220
MB 280-386220/4-A	Method Blank	Total/NA	Water	335.4	386220
HLCS 280-386220/1-A	Lab Control Sample	Total/NA	Water	335.4	386220
LCS 280-386220/3-A	Lab Control Sample	Total/NA	Water	335.4	386220
LLCS 280-386220/2-A	Lab Control Sample	Total/NA	Water	335.4	386220

Lab Chronicle

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Client Sample ID: Q MW-12

Date Collected: 08/23/17 15:00
Date Received: 08/24/17 14:15

Lab Sample ID: 280-100568-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	20 mL	20 mL	386660	09/06/17 08:30	C1L	TAL DEN
Total/NA	Prep	3520C			1037.9 mL	1 mL	385728	08/27/17 08:32	JDW	TAL DEN
Total/NA	Analysis	8270C		1			386133	08/30/17 16:34	PR1	TAL DEN
Total/NA	Prep	245.1			30 mL	50 mL	385783	08/28/17 11:33	CDH	TAL DEN
Total/NA	Analysis	245.1		1			385922	08/28/17 17:19	CDH	TAL DEN
Total/NA	Prep	Distill/CN			50 mL	50 mL	386220	08/31/17 05:50	JML	TAL DEN
Total/NA	Analysis	335.4		1	50 mL	50 mL	386301	08/31/17 11:40	JML	TAL DEN
Total/NA	Prep	351.2			25 mL	25 mL	386047	08/29/17 23:36	KAM	TAL DEN
Total/NA	Analysis	351.2		1			386218	08/30/17 23:49	KAM	TAL DEN
Total/NA	Prep	365.2/365.3/365			50 mL	50 mL	385799	08/28/17 09:58	IEU	TAL DEN
Total/NA	Analysis	365.1		1			385969	08/29/17 11:24	IEU	TAL DEN
Total/NA	Prep	Distill/Phenol			50 mL	50 mL	386052	08/30/17 06:13	JML	TAL DEN
Total/NA	Analysis	420.4		1	100 mL	100 mL	386135	08/30/17 09:50	JML	TAL DEN
Total/NA	Analysis	SM 5310B		1			385927	08/28/17 12:36	CCJ	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: Stewart Environmental Consultants Inc
Project/Site: Analytical Testing

TestAmerica Job ID: 280-100568-2

Laboratory: TestAmerica Denver

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	DoD ELAP		2907.01	10-31-17
A2LA	ISO/IEC 17025		2907.01	10-31-17
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-18
Arizona	State Program	9	AZ0713	12-20-17
Arkansas DEQ	State Program	6	88-0687	06-01-18
California	State Program	9	2513	01-08-18
Connecticut	State Program	1	PH-0686	09-30-18
Florida	NELAP	4	E87667	06-30-18
Georgia	State Program	4	N/A	01-08-18
Illinois	NELAP	5	200017	04-30-18
Iowa	State Program	7	370	12-01-18
Kansas	NELAP	7	E-10166	04-30-18
Louisiana	NELAP	6	02096	06-30-18
Maine	State Program	1	CO0002	03-03-19
Minnesota	NELAP	5	8-999-405	12-31-17
Nevada	State Program	9	CO0026	07-31-18
New Hampshire	NELAP	1	205310	04-28-18
New Jersey	NELAP	2	CO004	06-30-18
New York	NELAP	2	11964	04-01-18
North Carolina (WW/SW)	State Program	4	358	12-31-17
North Dakota	State Program	8	R-034	01-09-18
Oklahoma	State Program	6	8614	08-31-18
Oregon	NELAP	10	4025	01-08-18
Pennsylvania	NELAP	3	68-00664	07-31-18
South Carolina	State Program	4	72002001	01-08-18
Texas	NELAP	6	T104704183-16-12	09-30-17
USDA	Federal		P330-16-00397	12-15-19
Utah	NELAP	8	CO00026	07-31-18
Virginia	NELAP	3	460232	06-14-18
Washington	State Program	10	C583	08-03-18
West Virginia DEP	State Program	3	354	11-30-17
Wisconsin	State Program	5	999615430	08-31-18
Wyoming (UST)	A2LA	8	2907.01	10-31-17

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

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, LLC.
2600 Canton Ct, Unit C, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

Batch:

PAGE ___ OF ___

Client No.
LAB

CLIENT: **Stewart Environmental**

SAMPLER
Print: James Stewart
Signature:

Sample No.	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	Chlorine (ppm) if applicable	SAMPLE IDENTIFICATION / NAME	Matrix Type	QC Report Needed	Total No. of Bottles	Analyses Requested
	8-23-17	15:00	G		Q. MW-12	WW	Y	8	8260B including: 1,1-DCE; Freon-11; Freon-113; Trans 1,2-DCE; 1,1-DCA; Cis-1,2-DCE; Chloroform; 2-Butanone (MEK); 4-Isopropyltoluene; 1,1,1-TCA; Trichloroethelene (TCE); Toluene; tetrachloroethylene (Perc); tetrahydrofuran (THF); vinyl chloride; total xylenes; benzene; Acetonitrile (Methyl Cyanide); Ethyl Methacrylate; 2-Pentanone, 4-Methanone
									8270 Expanded List
									Phenols, TKN, Mercury, Cyanide, Total Phosphorous, TOC

Notes:

Relinquished by	Date / Time	Received by	Date / Time
	8-23-17 19:00	Lauren Van	8/24/17 1415

Database Entry By | Date

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = liquid W = water
S = soil SL = sludge
A = Air SD = Solid

____CDPHE REPORT REQUIRED

PWSID #

REPORT TO: Trevor Mueller
PHONE: 970.226.5500 FAX:
E-MAIL: Lab@stewartenv.com
CLIENT:
ADDRESS: 2600 Canton Ct, Suite C
CITY, STATE, ZIP: Fort Collins, CO 80525
INVOICE TO:
ADDRESS:
CITY, STATE ZIP:

Login Sample Receipt Checklist

Client: Stewart Environmental Consultants Inc

Job Number: 280-100568-2

Login Number: 100568

List Source: TestAmerica Denver

List Number: 1

Creator: True, Joshua A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	Refer to Job Narrative for details.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Parameter	Compound CAS Number	CDPHE Water Quality Groundwater Standards	MW-1		MW-2	MW-2R	MW-3B		MW-4		MW-5		MW-6		MW-7	MW-8	MW-9	MW-10	MW-11		MW-13	MW-14	MW-15	MW-16	MW-17	MW-18	MW-19	MW-20	QMW-12
			12/16/2016	7/10/2017	12/16/2017	7/17/2017	12/16/2017	7/10/2017	12/16/2017	7/17/2017	12/16/2017	7/12/2017	12/16/2017	7/6/2017					7/11/2017	7/11/2017	7/12/2017		7/10/2017	7/6/2017			7/27/2017	7/13/2017	8/23/2017
				7/12/2017		7/20/2017		7/17/2017		7/27/2017		7/20/2017		7/10/2017					7/19/2017	7/19/2017	7/20/2017		7/12/2017	7/12/2017				7/20/2017	
				7/20/2017				7/20/2017						7/19/2017							7/25/2017		7/17/2017	7/17/2017					
																							7/20/2017	7/20/2017					
VOC's (Method 8260) ug/l																													
Acetone	67-64-1	6300	<2	32	<2000	<380	<20	28	Dry Well - No Sample	9.1 - J	<2	<1.9	<2	4.1 - J	Dry - No Sample	Dry - No Sample	Not Installed - on Waste Connections Property	Not Installed - on Waste Connections Property	25.00	23.00	110 - J	Dry - No Sample	42.00	<190	Dry - No Sample	Dry - No Sample	<1.9	28.00	<1.9
Benzene	71-43-2	5	<2	<0.16	<2000	<32	<20	<0.16		<0.16	<2	<0.16	<2	0.37 - J					0.24 - J	1.8 - J	<6.4		<0.16	<16			<0.16	<0.16	<0.16
1-1, DCE	75-35-4	7	<2	<0.13	<2000	<46	<20	<0.23		<0.23	<2	<0.2	<2	<0.23					<0.22	0.51 - J	240		<0.23	35 - J			<0.22	<0.22	<0.22
Freon-11	75-69-4	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA					NA	NA	NA		NA	NA			NA	NA	<0.29
Freon-113	76-13-1	NA	NA	NA	NA	NA	NA	NA		NA	NA	NA	NA	NA					NA	NA	200		NA	NA			NA	<0.42	<0.42
1,4-Dichlorobenzene	106-46-7	75	<2	<0.16	<2000	<32	<20	<0.16		<0.16	<2	<0.16	<2	1.20					4.9	1.3 - J	<6.4		<0.14	<16			<0.16	<0.16	<0.16
1.2.4-Trimethylbenzene	95-63-6	NA	<2	<0.15	<2000	<30	<20	<0.15		<0.21	<2	<0.21	<2	<0.15					0.17 - J	1.8 - J	<6.0		<0.13	<15			<0.15	<0.15	<0.15
Dichlorofloromethane	75-71-8	NA	<2	<0.31	<2000	<62	<20	<0.31		0.59 - J	<2	<0.31	<2	0.81 - J					<0.31	<0.62	<12		<0.31	70 - J			<0.31	<0.31	<0.31
Trans 1,2-DCE	156-60-5	140 or 100	<2	<0.15	<2000	<30	<20	<0.15		<0.15	<2	0.89 - J	<2	<0.13					<0.15	<0.30	<6		<0.15	33 - J			<0.15	<0.15	<0.15
1,1-DCA	74-34-3	NA	<2	<0.22	<2000	<44	<20	<0.22		2	<2	<0.13	<2	0.50 - J					<0.22	8.2	17 - J		<0.21	95 - J			<0.22	<0.13	<0.13
Cis-1,2-DCE	156-60-2	14 to 70	<2	<0.15	<2000	2000	<20	<0.15		<0.15	<2	4	<2	1.60					<0.17	7.9	<6		<0.15	1900			<0.15	<0.22	<0.22
1,3,5-Trimethylbenzene	108-67-8	NA	<2	<0.16	<2000	<32	<20	<0.16		<0.16	<2	<0.16	<2	<0.16					<0.16	0.63 - J	<6.4		<0.16	<16			<0.16	<0.16	<0.16
Chlorobenzene	108-90-7	100	<2	<0.17	<2000	<34	<20	<0.17		<0.17	<2	<0.17	<2	<0.17					0.49 - J	<0.34	<6.8		<0.17	<17			<0.17	<0.17	<0.17
Chloroform	67-66-3	3.5	<2	<0.16	<2000	<32	<20	<0.16		0.24 - J	<2	<0.30	<2	<0.16					<0.32	<0.32	<6.4		<0.16	<16			0.60 - J	<0.16	<0.16
Ethylbenzene	100-41-4	700	<2	<0.16	<2000	<32	<20	<0.16		<0.16	<2	<0.16	<2	<0.16					<0.16	2.0	<6.4		<0.16	<16			<0.16	<0.16	<0.16
Isopropylbenzene	92-82-8	NA	<2	<0.19	<2000	<38	<20	<0.19		<0.19	<2	<0.19	<2	<0.19					<0.19	0.75 - J	<7.6		<0.19	<19			<0.19	<0.19	<0.19
4-Isopropyltoluene	99-87-6	NA	<2	<0.20	<2000	<40	<20	<0.20		<0.20	<2	<0.20	<2	<0.20					0.37 - J	0.68 - J	<8.0		<0.20	<20			<0.20	<0.20	<0.20
4-Methyl-2-pentanone (MIBK)	99-87-6	NA	<2	<0.98	<2000	<200	<20	<0.98		<5.0	<2	<0.98	<2	<0.98					0.98 - J	<2.0	<39		1.9 - J	<98			<5.0	<0.98	<0.98
2-Butanone (MEK)	78-93-3	NA	<2	<2.0	526000	<400	<20	<2.0		3.9 - J	<2	<2.0	<2	<2.0					<2.0	<4.0	<80		<2.0	<200			<2.0	<2.0	<2.0
1,1,1-TCA	71-55-6	14,000 or 200	<2	<0.16	<2000	<32	<20	<0.16		<0.16	<2	<0.27	<2	<0.16					<0.16	<0.32	<6.4		<0.16	<16			<0.16	<0.16	<0.16
Methlyne Chloride	75-09-2	5.6 or 5	<2	<0.32	<2000	<64	<20	<0.32		<0.32	<2	<0.32	<2	<0.32					<0.32	<0.64	26 - J B		<0.32	<32			0.89 - J B	<0.32	<0.32
Naphthalene	91-20-3	140	<2	<0.22	<2000	<44	<20	<0.22		<0.22	<2	<0.22	<2	<0.22					<0.22	2.7	<8.8		<0.22	<22			<0.22	<0.22	<0.22
N-Propylbenzene	103-65-1	NA	<2	<0.16	<2000	<32	<20	<0.16		<0.16	<2	<0.16	<2	<0.16					<0.16	0.63 - J	<6.4		<0.16	<16			<0.16	<0.16	<0.16
Trichloroethlene (TCE)	79-01-6	2.8 to 5	<2	<0.24 - J	<2000	3600	<20	0.33 - J		0.29 - J	<2	11	<2	0.60 - J					<0.16	<0.40	1500		<0.16	3200			<0.20	<0.20	<0.20
Toluene	108-88-3	560 to 1,000	<2	<0.17	68000	<34	1190	0.17 - J		<0.17	<2	<0.17	<2	<0.17					0.17 - J	5.9	<6.8		<0.17	<17			<0.17	0.17 - J	<0.20
Tetrachloroethylene (Perc)	127-18-4	17 or 5	<2	<0.20	<2000	<40	<20	<0.20		<0.20	<2	4.7	<2	0.55 - J					<0.20	<0.40	<8.0		<0.20	<20			<0.20	<0.20	<0.20
Tetrahydrofuran (THF)	109-99-9	6300	<2	<2.0	<2000	<410	<20	<2.0		<0.2	<2	18	<2	<2.0					<2.0	61	99 - J		<2.0	530 - J			<2.0	<2.0	<2.0
Vinyl Chloride	75-01-4	0.023 to 2	<2	<0.10	<2000	<20	<20	<0.10		<0.10	<2	1.3	<2	2					<0.1	21	<4.0		<4.0	300			<0.10	<0.10	<0.10
Xylenes - Total	1330-20-7	1,400 to 10,000	<2	<0.19	<2000	<38	<20	<0.19		<0.19	<2	<0.19	<2	<0.19					<0.19	3.8 - J	<7.6		<0.19	<19			<0.19	0.23 - J	<0.19
1,2 DCE	107-6-2	7	<2	<0.13	<2000	2000	<20	<0.13		<0.13	<2	5	<2	<0.13					<0.13	<0.13	<0.13		<0.13	1900			<0.13	<0.13	<0.13
Remaining VOC's are ND			<2	<0.20	<2000	<38	<20	<0.20		<0.19	<2	<0.2	<2	<0.20					<0.20	<0.20	<6		<0.2	<20			<0.2	<0.2	<0.2
SOC's (Method 8270) ug/l																													
1,4 - Dioxane	123-91-1	0.35	<2	<2	80	67	<2	Laboratory Missing Sample - not analyzed	Dry Well - No Sample	11	<2	Laboratory Missing Sample - not analyzed	<2	Laboratory Missing Sample - not analyzed	Dry - No Sample	Dry - No Sample	Not Installed - On Waste Connections Property	Not Installed - On Waste Connections Property	12	64	41	Dry - No Sample	<2	35	Dry - No Sample	Dry - No Sample	<2	<2	<1.6
Benzo(g,h,i)perylene	191-24-2	NA	<2	<2	<2	<2	<2			<2	<2		<2						<2	<2	<2		<2	23			<2	<2	<2
Benzoic Acid	65-85-0	NA	<20	<20	70.0	<20	<2			<20	<20		<20						<20	<20	<20		<20	<20			<20	<20	<20
Benzyl alcohol	100-51-6	NA	<2	<2	15.0	<2	<2			<2	<2		<2						<2	<2	<2		<2	<2			<2	<2	<2
Bis(2-ethylhexyl) phthalate	117-81-7	6.0	<4	<4	<3	54	<2			<4	<4		<4						<4	<4	<4		<4	<4			<4	<4	<4
Di-n-octyl phthalate	117-84-0	NA	<2	<2	<2	<2	<2			<2	<2		<2						<2	<2	<2		<2	5-J			<2	<2	<2
2-Methylphenol	95-48-7	NA	<2	<2	133	<2	9 - J			<2	<2		<2						<2	<2	<2		<2	6-J			<2	<2	<2
Indeno(1,2,3-cd)pyrene	193-39-5	NA	<2	<2	<2	<2	<2			<2	<2		<2						<2	<2	<2		<2	10.00			<2	<2	<2
Remaining SOC's are ND			<2	<2	<3	<3	<2			<2	<2		<2						<2	<2	<2		<2	<2			<2	<2	<2
Total Organic Carbon mg/l	7440-44-0	**NA**	10.5	15.6	568	31.5	42.6	47.1	No Sample	41.2	39.4	40.0	39.4	48.3	No Sample	No Sample	No Sample	No Sample	29.9	87.3	38.4	No Sample	151.0	1.0	No Sample	No Sample	6.7	15.9	20
Metals mg/l																													
Antimony	7440-36-0	0.006	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	No Sample	<0.03	<0.03	<0.03	<0.03	<0.03	Dry - No Sample	Dry - No Sample	Not Installed - on Waste Connections Property	Not Installed - on Waste Connections Property	<0.03	<0.03	<0.03	Dry - No Sample	<0.03	<0.03	Dry - No Sample	Dry - No Sample	<0.03	<0.03	<0.03
Arsenic	7440-38-2	0.010	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02					<0.02	<0.02	<0.02		<0.02	0.072			<0.02	<0.02	<0.02
Barium	7440-39-3	2.000	0.172	0.048	0.092	0.097	0.066	0.054		0.033	0.062	0.033	0.062	0.047					0.119	0.251	0.056		0.084	0.189			0.025	0.059	0.08
Beryllium	7440-41-7	0.004	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		0.0006	0.01	<0.0005	0.01	<0.0005					<0.0005	<0.0005	0.0008		<0.0005	0.01			<0.0005	<0.0005	0.0006
Cadmium	7440-43-9	0.005	0.01	<0.003	<0.003	<0.003	<0.003	<0.003		<0.003	0.01	<0.003	0.01	<0.003					<0.003	<0.003	<0.003		<0.003	0.006			<0.003	<0.003	<0.003
Calcium	7440-70-2	NA	223	315	231	455	387	393		420	427	292	427	457					331	349	480		427	407			213	408	391
Chromium	7440-47-3	0.100	<0.005	<0.005	0.01	<0.005	<0.005	<0.005		<0.005	0.018	<0.005	0.018	<0.005					<0.005	<0.005	<0.005		<0.005	0.021			<0.005	<0.005	0.093
Cobalt	7440-48-4	NA	<0.002	0.003	0.01	0.004	0.01	0.003		0.003	0.030	0.012	0.030	0.020					0.021	0.061	0.007		0.014	0.058			<0.002	0.002	0.02
Copper	7440-50-8	1.000	0.025	0.006	0.021	0.007	0.008	0.007		0.009	0.109	0.027	0.109	0.011					0.016	0.006	0.014		0.023	0.113			0.009	0.011	0.067
Lead	7439-92-1	0.015	0.06	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	0.104	0.025	0.10	<0.02					<0.02	<0.02	<0.02		<0.02	0.054			<0.02	<0.02	<0.02
Magnesium	7439-95-4	NA	110	92.8	256	118	244	122		123	148	103	148	95.5					73.9	92.9	129		127	118			56	80.4	121.00
Mercury	7439-97-6	0.002	NA	<0.000033 - J	NA	<0.000030 - J	NA	<0.000027		0.000037 - J	NA	0.000092 - J	NA	0.00110					0.00058	0.0026	0.000043 - J		0.0010	0.0011			<0.000027	<0.000027	<0.000060-J
Nickel	7440-02-0	0.100	0.01	0.011	0.02	0.018	0.03	0.028		0.023	0.069	0.022	0.069	0.022					0.024	0.080	0.028		0.024	0.132			0.004	0.005	0.026
Potassium	7440-09-7	NA	9.66	4.84	10.5	27.0	21.6	16.9		19.9	21.9	9.67	21.9	16.5					24.5	33.3	28.9		25.7	23.6			17.0	24.6	24.60
Selenium	7782-49-2	0.050	<0.01	<0.01	<0.02	<0.01	0.502	0.203		0.463	<0.02	<0.01	<0.02	<0.01					<0.01	<0.01	<0.01		0.065	0.029			0.106	0.109	0.049
Silver	7440-22-4	0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005		<0.005	<0.005	<0.005	<0.005	<0.005					<0.005	<0.005	<0.005		<0.005	<0.005			<0.005	<0.005	<0.005
Sodium	7440-23-5	NA	538	520	1600	1100	2120	2300		2600	612	1500	612	930					320	790	2200		1900	1300			500	920	2100
Thallium	7440-28-0	0.002	<0.2	<0.1	<0.2	<0.1	<0.2	<0.1		<0.1	<0.2	<0.1	<0.2	<0.1					<0.1	<0.1	<0.1		<0.1	<0.1			<0.1	<0.1	<0.2
Vanadium	7440-62-2	NA	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02		<0.02	0.07	<0.02	0.07	<0.02					<0.02	<0.02	<0.02		0.020	0.082			<0.02	<0.02	0.021
Zinc	7440-66-6	5.00	0.086	0.070	0.060	0.069	0.083	0.069		0.029	0.693	0.178	0.693	0.334					0.159	0.216	0.068		0.053	0.275			0.283	0.075	0.169
Inorganic Compounds																													
Carbonate	3812-32-6	NA	<2	<2	<2	<2	<2	<2	Dry Well - No Sample	<2	<2	<2	<2	<2	Dry - No Sample	Dry - No Sample	Not Installed - On Waste Connections Property	Not Installed - On Waste Connections Property	<2	<2	<2	Dry - No Sample	<2	<2	Dry - No Sample	Dry - No Sample	6.70	<2	<2
Cyanide	74-90-8	0.20	NA	0.008 - J	NA	0.0020-JF1B	NA	<0.0002		<0.023 - J	NA	0.0022 - J	NA	0.011					0.024 - B	0.035 - B	<0.039 - J		<0.002	0.0016 - J			0.00026 - J	<0.0002	0.014-B
Bi-Carbonate	144-55-8	NA	631	698	1575	2004	472	647		1464	1941	1010	1941	2236					1485	3264	1882		1595	1135			778	738	1293
Nitrite+Nitrate	14797-55-8	10.0	0.369	0.876	<0.1	0.995	38.8	24.5		45.4	181	0.978	181	1.03					0.589	2.15	1.74		7.83	4.91			4.62	2.55	33.9
Sulfate	14808-79-8	NA	1160	1583	4640	3628	7100	7091		6880	5870	4651	5870	3000					1227	720	7672		5959	4462			9155	3907	6180
Sulfide	18496-25-8	NA	NA	<0.1	NA	<0.1	NA	<0.1		<0.1	NA	<0.1	NA	<0.1					0.69	1.39	<0.1		<0.1	<0.1			<0.1	<0.1	<0.1
Other Organics ug/l																													
Phenol	108-95-2	2100	<4	<4	<5	6 - B	<4	<4	Dry	<4	<4	<4	<4	<4	No Sample	No Sample	No Sample	No Sample	<4	<4	<4	No Sample	<4	<4	No Sample	No Sample	<4	<4	<6.8

ND - Not Detected - MDL Not Reported
NA - Not Analyzed or Not Applicable
J - the estimated value is between the MDL and PQL
B - the estimated value is between the MDL and PQL

July 17, 2017

EARTH ENGINEERING CONSULTANTS, LLC

Stratus Companies
8480 E. Orchard Road, Suite 1100
Greenwood Village, Colorado 80111

Attn: Mr. Richard Dean (rdean@stratuscompanies.com)

Re: Report of Limited Subsurface Exploration
Erie Landfill Closure – Monitoring Well Installation
Erie, Weld County, Colorado
EEC Project No. 1162119

Mr. Dean:

Earth Engineering Consultants, LLC (EEC) personnel have completed a limited subsurface exploration, including observation of thirteen (13) bore holes and the installation of groundwater monitoring wells / measurement devices in the bore holes for the referenced project. As we understand, Stratus Companies (Stratus) is planning on developing the parcel of land for open space which was historically a landfill, situated west of Weld County Road (WCR) 5, north of WCR 4 and south WCR 6 in Erie, Colorado. As part of the landfill closure process, an environmental site assessment (ESA) is being conducted by Stewart Environmental Consultants (SEC) of Fort Collins, Colorado. SEC requested EEC personnel be present during the drilling and installation phase of thirteen (13) bore holes and monitoring wells to log zones of trash, soil, bedrock and water profile conditions as part of their environmental site assessment on behalf of Stratus. The purpose and sampling of the wells is beyond EEC's scope of work and SEC is handling that aspect. This limited evaluation was completed in general accordance with our electronic (e-mail) proposal dated May 11, 2017.

SITE EXPLORATION AND TESTING PROCEDURES

As part of this limited subsurface exploration, thirteen (13) soil borings, which were converted to groundwater monitoring wells, were completed at the approximate locations as indicated on the site diagram included with this report. The location of each boring and monitoring well was pre-determined by a representative with SEC. The borings were extended to depths ranging from approximately 14-1/2 to 71 feet below existing site grades as directed by SEC personnel. Upon

4396 GREENFIELD DRIVE
WINDSOR, COLORADO 80550
(970) 545-3908 FAX (970) 663-0282
www.earth-engineering.com

completion of the drilling operations, which were performed by a licensed water well drilling subcontractor, (Drilling Engineers of Fort Collins, Colorado), bore holes were converted to PVC cased monitoring wells, in general accordance with the water well construction rules from the Division of Water Resources, for future measurements and sampling of groundwater to be conducted by SEC. Results of the field and limited laboratory testing completed by EEC personnel for this assessment are included with this report.

The thirteen (13) soil boring/monitoring well locations were established in the field by a representative with SEC. The notification and permitting of the thirteen (13) monitoring wells were provided by SEC personnel. The approximate location for each boring/monitoring well should be considered accurate only to the degree implied by the methods used to make the field measurements.

The soil borings were completed using a truck-mounted, CME 55 drill rig equipped with a hydraulic head employed in drilling and sampling operations. The boreholes were advanced using 4¼-inch nominal ID hollow stem augers to maintain open boreholes for sampling and PVC monitoring well/pipe installation. Samples of the subsurface materials encountered were obtained at varying intervals using the split barrel/Standard Penetration Test (SPT) sampling procedures in general accordance with ASTM Specifications D1586.

In the split barrel sampling procedures, standard sampling spoons are driven into the ground by means of a 140-pound hammer falling a distance of 30 inches. The number of blows required to advance the split barrel sampler is recorded and is used to estimate the in-situ relative density of cohesionless soils and, to a lesser degree of accuracy, the consistency of cohesive soils. All samples obtained in the field were sealed and returned to our laboratory for further examination, classification and testing.

After completing the drilling and sampling, prior to removal of the hollow stem augers, PVC cased monitoring wells were installed in the open boreholes through the hollow stem augers. The monitoring wells/piezometers were constructed with 2-inch nominal diameter schedule 40 manufactured well screen and riser pipe. In general, the monitoring wells, as requested by SEC personnel, consisted of 10, 15, or 20-foot sections of flush threaded slotted well screen placed above a 6-inch bottom cap with flush threaded solid riser pipe, as required, to extend the piezometers above ground level. The screened portion of the monitoring wells and 1 to 34 feet above the screened section, was backfilled with a 10/20 silica sand, and the remaining portion of

the well annulus was backfilled with bentonite to the surface. A steel casing with locking top was positioned at the surface of each monitoring well. It is our understanding Drilling Engineers, following installation of all monitoring wells, went to encase the base of all the steel casing with locking tops with a concrete "donut pad" apron for protection and to divert surficial water flow. Cross-sectional schematics of the monitoring well installation and soil descriptions at each location based on visual and tactual observation are indicated on the attached boring logs.

Limited laboratory testing completed on recovered samples included moisture contents on all retrieved split-spoon samples. Results of the outlined tests are indicated on the attached boring logs and summary sheets.

As a part of the testing program, all samples were examined in the laboratory and classified in general accordance with the attached General Notes and the Unified Soil Classification System, based on the soils' texture and plasticity. The estimated group symbol for Unified Soil Classification System is indicated on the boring logs and a brief description of that classification system is included with this report. Classification of the bedrock was based on visual and tactual evaluation of disturbed samples and auger cuttings. Coring and/or petrographic analysis may reveal other rock types.

SUBSURFACE SOIL and GROUNDATER CONDITIONS

Based on results of the field borings and limited laboratory testing, subsurface conditions can be generalized as follows. Sparse vegetation was observed at the surface of each boring. The sparse vegetation was generally underlain by cohesive subsoils visually classified as sandy lean clay with near surface trash also observed at borings MW-2R, MW-7, MW-8, MW 11, MW-12, and MW-18. The sandy lean clay soils extended to approximate depths of 2 to 8 feet below present site grades. In borings MW-2R, MW-11, MW-12 and MW-18 the subsurface sandy lean clay was underlain by sandy lean to fat clay which extended to depths of approximately 7 to 14 feet below current site grades. Trash was not encountered in borings MW-13 through MW-17, MW-19, and MW-20. In general, the trash was identified as magnetic tape, plastic, styrofoam, wood, and glass. The underlying trash and/or cohesive materials in the borings extended to the underlying bedrock formation. The varying zones of claystone/siltstone/sandstone and interbedded claystone/siltstone/sandstone bedrock was encountered within each boring at depths ranging from approximately 1 to 14 feet below present site grades and extended to the depths explored, approximately 14-1/2 to 71 feet below present site grades. Occasional zones of

cemented sandstone/siltstone bedrock were encountered. The bedrock was generally weathered/soft to moderately hard at the trash and/or soil bedrock interface becoming more competent/moderately hard to hard with depth.

The stratification boundaries indicated on the boring logs represent the approximate locations of changes in trash, soil and bedrock types; in-situ, the transition of materials may be gradual and indistinct.

Observations were made while drilling the borings on July 5, 6, and 10 through 13, 2017 as noted on each of the enclosed Log of Borings, to detect the presence and depth of measureable water levels. As indicated on the enclosed boring/monitoring well logs, water was encountered in borings MW-2R, MW-11, MW-12, MW 15 and MW-16 at approximate depths of 4 to 20 feet below existing site grades, while water was not encountered to maximum depths of exploration in the remaining borings. The water level measurements are indicated in the upper right hand corner of the boring/monitoring well logs. Fluctuations in water levels can occur over time depending on variations in hydrologic conditions and other conditions not apparent at the time of this report. Water level measurements indicated on the boring logs represent the depth of water at the specific time and location of the measurements completed.

Zones of perched and/or trapped water may occur at times in the subsurface trash and/or soils overlying bedrock, on top of the bedrock surface or within permeable fractures in the bedrock materials. The location and amount of perched water is dependent upon several factors, including hydrologic conditions, type of site development, irrigation demands on or adjacent to the site, and seasonal and weather conditions. These observations represent water conditions at the time of the field exploration, and may not be indicative of other times, or at other locations.

GENERAL COMMENTS

The analysis and information presented in this report is based upon the data obtained from the soil borings performed at the indicated locations as discussed in this report. This report does not reflect any variations which may occur between borings or across the site.

This report has been prepared for the exclusive use of Stratus, and/or assignees for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranty, express or implied, is made.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report, or if we can be of further service to you in any other way, please do not hesitate to contact us.

Very truly yours,
Earth Engineering Consultants, LLC

Erin Dunn, E.I.T.
Project Engineer

Reviewed by:

COLORADO LICENSED
DAVID A. RICHER
27712
7-18-17
PROFESSIONAL ENGINEER

David A. Richer, P.E.
Senior Geotechnical Engineer

cc: Stewart Environmental Consultants – Mr. Dave Stewart (Dave.Stewart@stewartenv.com)

DRILLING AND EXPLORATION

DRILLING & SAMPLING SYMBOLS:

SS: Split Spoon - 13/8" I.D., 2" O.D., unless otherwise noted
ST: Thin-Walled Tube - 2" O.D., unless otherwise noted
R: Ring Barrel Sampler - 2.42" I.D., 3" O.D. unless otherwise noted
PA: Power Auger
HA: Hand Auger
DB: Diamond Bit = 4", N, B
AS: Auger Sample
HS: Hollow Stem Auger
PS: Piston Sample
WS: Wash Sample
FT: Fish Tail Bit
RB: Rock Bit
BS: Bulk Sample
PM: Pressure Meter
WB: Wash Bore

Standard "N" Penetration: Blows per foot of a 140 pound hammer falling 30 inches on a 2-inch O.D. split spoon, except where noted.

WATER LEVEL MEASUREMENT SYMBOLS:

WL : Water Level
WCI: Wet Cave in
DCI: Dry Cave in
AB : After Boring
WS : While Sampling
WD : While Drilling
BCR: Before Casing Removal
ACR: After Casting Removal

Water levels indicated on the boring logs are the levels measured in the borings at the time indicated. In pervious soils, the indicated levels may reflect the location of ground water. In low permeability soils, the accurate determination of ground water levels is not possible with only short term observations.

DESCRIPTIVE SOIL CLASSIFICATION

Soil Classification is based on the Unified Soil Classification system and the ASTM Designations D-2488. Coarse Grained Soils have move than 50% of their dry weight retained on a #200 sieve; they are described as: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are described as : clays, if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse grained soils are defined on the basis of their relative in-place density and fine grained soils on the basis of their consistency. Example: Lean clay with sand, trace gravel, stiff (CL); silty sand, trace gravel, medium dense (SM).

CONSISTENCY OF FINE-GRAINED SOILS

Unconfined Compressive Strength, Qu, psf	Consistency
< 500	Very Soft
500 - 1,000	Soft
1,001 - 2,000	Medium
2,001 - 4,000	Stiff
4,001 - 8,000	Very Stiff
8,001 - 16,000	Very Hard

RELATIVE DENSITY OF COARSE-GRAINED SOILS:

N-Blows/ft	Relative Density
0-3	Very Loose
4-9	Loose
10-29	Medium Dense
30-49	Dense
50-80	Very Dense
80 +	Extremely Dense

PHYSICAL PROPERTIES OF BEDROCK

DEGREE OF WEATHERING:

Slight	Slight decomposition of parent material on joints. May be color change.
Moderate	Some decomposition and color change throughout.
High	Rock highly decomposed, may be extremely broken.

HARDNESS AND DEGREE OF CEMENTATION:

Limestone and Dolomite:

Hard	Difficult to scratch with knife.
Moderately	Can be scratched easily with knife.
Hard	Cannot be scratched with fingernail.
Soft	Can be scratched with fingernail.

Shale, Siltstone and Claystone:

Hard	Can be scratched easily with knife, cannot be scratched with fingernail.
Moderately Hard	Can be scratched with fingernail.
Soft	Can be easily dented but not molded with fingers.

Sandstone and Conglomerate:

Well Cemented	Capable of scratching a knife blade.
Cemented	Can be scratched with knife.
Poorly Cemented	Can be broken apart easily with fingers.

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests					Soil Classification: Group Symbol	Soil Classification: Group Name
Coarse - Grained Soils more than 50% retained on No. 200 sieve	Gravels more than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines	Cu≥4 and 1<Cc≤3[E]		GW	Well-graded gravel [F]
			Cu<4 and/or 1>Cc>3[E]		GP	Poorly-graded gravel [F]
		Gravels with Fines more than 12% fines	Fines classify as ML or MH		GM	Silty gravel [G,H]
			Fines Classify as CL or CH		GC	Clayey Gravel [F,G,H]
	Sands 50% or more coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines	Cu≥6 and 1<Cc≤3[E]		SW	Well-graded sand [I]
			Cu<6 and/or 1>Cc>3[E]		SP	Poorly-graded sand [I]
		Sands with Fines more than 12% fines	Fines classify as ML or MH		SM	Silty sand [G,H,I]
			Fines classify as CL or CH		SC	Clayey sand [G,H,I]
Fine-Grained Soils 50% or more passes the No. 200 sieve	Silts and Clays Liquid Limit less than 50	inorganic	PI>7 and plots on or above "A" Line		CL	Lean clay [K,L,M]
			PI<4 or plots below "A" Line		ML	Silt [K,L,M]
		organic	Liquid Limit - oven dried / Liquid Limit - not dried	<0.75	OL	Organic clay [K,L,M,N] / Organic silt [K,L,M,O]
	Silts and Clays Liquid Limit 50 or more	inorganic	PI plots on or above "A" Line		CH	Fat clay [K,L,M]
			PI plots below "A" Line		MH	Elastic Silt [K,L,M]
		organic	Liquid Limit - oven dried / Liquid Limit - not dried	<0.75	OH	Organic clay [K,L,M,P] / Organic silt [K,L,M,O]
Highly organic soils		Primarily organic matter, dark in color, and organic odor			PT	Peat

[A]Based on the material passing the 3-in. (75-mm) sieve

[B]If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C]Gravels with 5 to 12% fines required dual symbols:

GW-GM well graded gravel with silt

GW-GC well-graded gravel with clay

GP-GM poorly-graded gravel with silt

GP-GC poorly-graded gravel with clay

[D]Sands with 5 to 12% fines require dual symbols:

SW-SM well-graded sand with silt

SW-SC well-graded sand with clay

SP-SM poorly graded sand with silt

SP-SC poorly graded sand with clay

[E]$Cu=D_{60}/D_{10}$ $Cc=\frac{(D_{30})^2}{D_{10} \times D_{60}}$

[F]If soil contains ≥15% sand, add "with sand" to

[G]If fines classify as CL-ML, use dual symbol GC-CM, or SC-SM.

[H]If fines are organic, add "with organic fines" to group name

[I]If soil contains >15% gravel, add "with gravel" to group name

[J]If Atterberg limits plots shaded area, soil is a CL-ML, Silty clay

[K]if soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel", whichever is predominant.

[L]If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

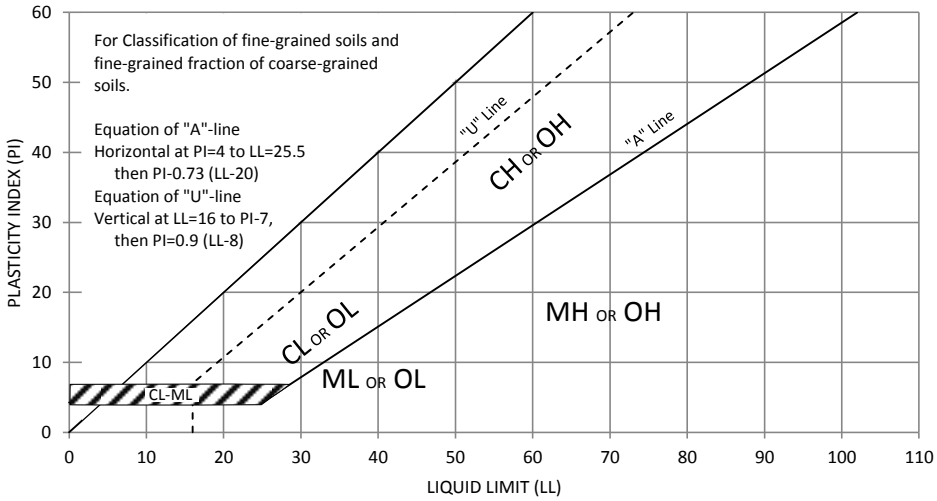
[M]If soil contains ≥30% plus No. 200 predominantly gravel, add "gravelly" to group name.

[N]PI≥4 and plots on or above "A" line.

[O]PI≤4 or plots below "A" line.

[P]PI plots on or above "A" line.

[Q]PI plots below "A" line.



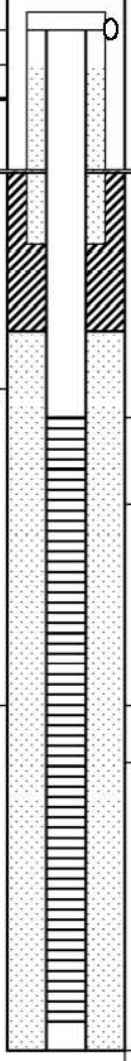
ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION

ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-2R		SHEET 1 OF 1
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/12/2017
FOREMAN: JJS		FINISH DATE	7/12/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

ATER DEP

WHILE DRILLING	
AFTER DRILLING	Loc
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWEL PRESS
SPARSE VEGETATION		1								
SANDY LEAN CLAY (CL) with occasional trash brown with plastic and styrofoam		2								
		3								
		4								
LEAN to FAT CLAY (CL/CH) / SLUDGE grey / black very soft	SS	5	1	--	29.6	5 ppm				
		6								
		7								
		8								
		9								
SILTSTONE / SANDSTONE brown / rust / gray moderately hard	SS	10	50/7"	--	14.5	2.5 ppm				
		11								
		12								
		13								
		14								
		15								
	SS	16	50/8"	9000+	13.1	185 ppm				
BOTTOM OF BORING DEPTH 16'		17								
		18								
Note: Boring terminated at an approximate depth of 15 feet below existing site grades, a split-spoon sample was then taken from 15 to 16 feet, and the monitoring well was set with a bottom elevation of 15 feet below site grades as per Stewart Environmental Consultants request.		19								
		20								
		21								
		22								
		23								
		24								
		25								

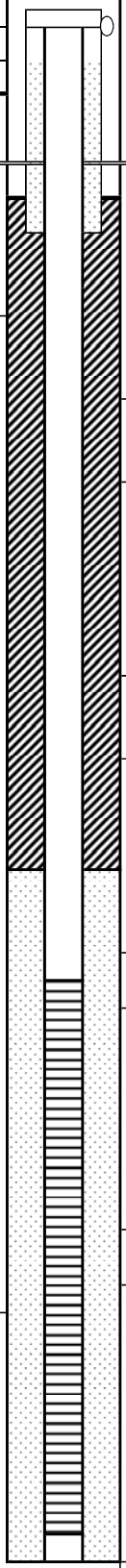
PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119			DATE: JULY 2017
	LOG OF MONITORING WELL MW-7		SHEET 1 OF 1
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/12/2017
FOREMAN: JJS		FINISH DATE	7/12/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION											
SANDY LEAN CLAY (CL) with occasional trash brown with glass, plastic, magnetic tape, etc.		1 2									
CLAYSTONE grey / brown / rust weathered / soft to moderately hard		3 4									
	SS	5	30	9000+	16.6	0 ppm					
		6 7 8 9									
with occastional gysum crystals and lignite	SS	10	36	9000+	14.9	0.5 ppm					
		11 12 13 14									
with occasional gypsum crystals	SS	15	50/7"	9000+	16.4	0.5 ppm					
		16 17 18 19									
	SS	20	50/6"	9000+	12.7	0.5 ppm					
CLAYSTONE / SILTSTONE / SANDSTONE brown / grey / rust moderately hard to hard		21 22 23 24 25									
BOTTOM OF BORING DEPTH 25.5'	SS		50/6"	9000+	10.5	0 ppm					

Note: Boring terminated at an approximate depth of 25 feet below existing site grades, a split-spoon sample was then taken from 25 to 25-1/2 feet, and the monitoring well was set with a bottom elevation of 25 feet below site grades as per Stewart Environmental Consultants request.

PIEZOMETER LEGEND

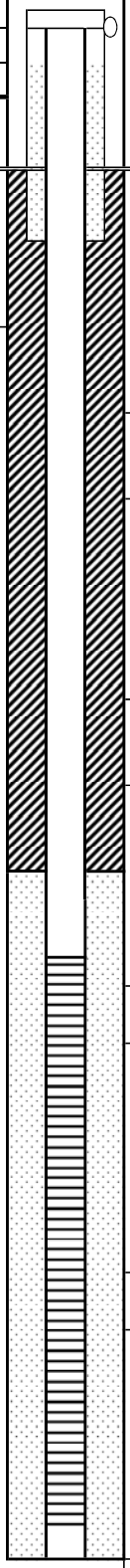
- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119			DATE: JULY 2017
	LOG OF MONITORING WELL MW-8		SHEET 1 OF 1
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/13/2017
FOREMAN: JJS		FINISH DATE	7/13/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION											
SANDY LEAN CLAY (CL) with occasional trash		1									
grey, brown, rust											
with trace gravel		2									
with plastic and trash											
		3									
CLAYSTONE / SILTSTONE											
brown, grey, rust		4									
highly weathered / soft to moderately hard											
	SS	5	7	4000	21.6	4 ppm					
		6									
		7									
		8									
		9									
grey / rust	SS	10	14	5500	24.3	3.6 ppm					
with calcareous deposits		11									
		12									
		13									
		14									
	SS	15	50/9"	9000+	13.2	5.6 ppm					
		16									
		17									
		18									
		19									
	SS	20	48	9000+	17.1	1.6 ppm					
		21									
		22									
		23									
		24									
	SS	25	50/7"	9000+	14.3	2.1 ppm					
BOTTOM OF BORING DEPTH 25'											

Note: Boring terminated at an approximate depth of 24 feet below existing site grades, a split-spoon sample was then taken from 24 to 25 feet, and the monitoring well was set with a bottom elevation of 24 feet below site grades as per Stewart Environmental Consultants request.

PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION

ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-11		SHEET 1 OF 1
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/10/2017
FOREMAN: JJS		FINISH DATE	7/10/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

ATER DEP

WHILE DRILLING	
AFTER DRILLING	Loc
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWEL PRESS
SPARSE VEGETATION		1								
SANDY LEAN CLAY (CL) with occasional trash brown with occasional plastic and plywood		2 3 4								
SANDY LEAN TO FAT CLAY (CL-CH) grey soft to medium stiff with occasional lignite	SS	5	2	1000	33.5	0.9 ppm				
		6 7 8 9								
brown / grey / rust	SS	10	7	1000	25.5	0.7 ppm				
		11 12								
CLAYSTONE / SILTSTONE / SANDSTONE brown / grey / rust moderately hard		13 14								
	SS	15	50/10"	3000	15.5	1.5 ppm				
		16 17 18 19								
Note: Boring terminated at an approximate depth of 20 feet below existing site grades, a split-spoon sample was then taken from 20 to 21 feet, and the monitoring well was set with a bottom elevation of 20 feet below site grades as per Stewart Environmental		20								
	SS	21	50/8"	7500	15.9	0.6 ppm				
BOTTOM OF BORING DEPTH 21.0'		22 23 24 25								

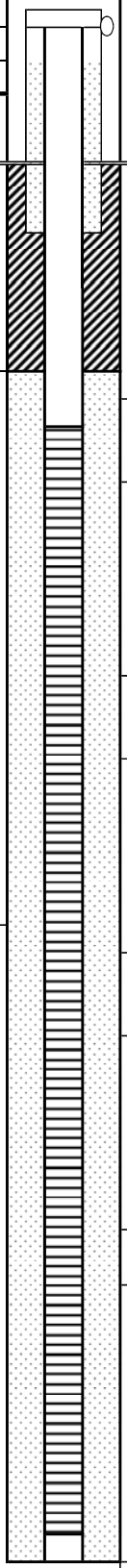
PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-12	SHEET 1 OF 1	
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/10/2017
FOREMAN: JJS		FINISH DATE	7/10/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	5'
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION		1									
SANDY LEAN CLAY (CL) with occasional trash											
brown		2									
with glass, platic, and wood		3									
		4									
SANDY LEAN TO FAT CLAY (CL-CH) with occ. Trash											
brown / grey / black	SS	5	4	--	36.4	9 ppm					
soft to medium stiff											
with glass, plastic, wood etc.		6									
		7									
		8									
brown / grey / rust / black		9									
bedrock transition zone											
	SS	10	5	1000	28.0	1.5 ppm					
		11									
		12									
		13									
		14									
CLAYSTONE											
brown / grey / rust / black	SS	15	16	4500	27.6	9 ppm					
highly weathered / soft to moderately hard											
with occasional trash, lignite and coal		16									
		17									
		18									
		19									
brown / grey / rust											
with occasional lignite and coal	SS	20	48	9000+	16.4	1.7 ppm					
with occasional gypsum crystals with depth		21									
		22									
		23									
		24									
		25									
BOTTOM OF BORING DEPTH 26'	SS		50/10"	9000+	15.0	2.6 ppm					

Note: Boring terminated at an approximate depth of 25 feet below existing site grades, a split-spoon sample was then taken from 25 to 26 feet, and the monitoring well was set with a bottom elevation of 25 feet below site grades as per Stewart Environmental Consultants request.

PIEZOMETER LEGEND

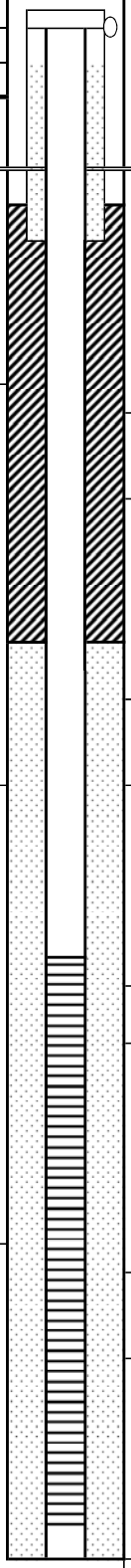
- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-13		SHEET 1 OF 1
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/11/2017
FOREMAN: JJS		FINISH DATE	7/11/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION											
SANDY LEAN CLAY (CL) brown		1, 2, 3, 4									
CLAYSTONE grey / brown / rust weathered / soft with occasional lignite	SS	5	22	7000	21.1	6.9 ppm					
		6, 7, 8, 9									
lignite seams											
weathered / more moist zone at approximately 10'	SS	10	14	6000	25.6	119 ppm					
CLAYSTONE / SILTSTONE / SANDSTONE brown / grey / rust weathered with occasional gypsum crystals		11, 12, 13, 14									
	SS	15	50/8"	--	14.8	3.6 ppm					
		16, 17, 18, 19									
CLAYSTONE grey / brown / rust soft to moderately hard with occasional gypsum crystals and lignite	SS	20	25	9000+	19.9	4.8 ppm					
		21, 22, 23, 24									
	SS	25	48	9000+	16.2	0.8 ppm					
BOTTOM OF BORING DEPTH 25.5'											

Note: Boring terminated at an approximate depth of 24 feet below existing site grades, a split-spoon sample was then taken from 24 to 25-1/2 feet, and the monitoring well was set with a bottom elevation of 24 feet below site grades as per Stewart Environmental Consultants request.

PIEZOMETER LEGEND

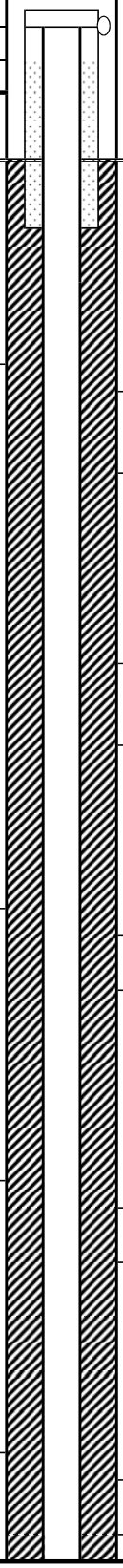
- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-14		SHEET 1 OF 2
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/11/2017
FOREMAN: JJS		FINISH DATE	7/11/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION											
SANDY LEAN CLAY (CL)		1									
brown		2									
		3									
		4									
CLAYSTONE											
grey / brown / rust	SS	5	18	9000+	21.9	1.7 ppm					
highly weathered / soft to moderately hard											
with occasional gypsum crystals		6									
		7									
		8									
with occasional gypsum crystals and lignite		9									
	SS	10	40	9000+	14.4	1.3 ppm					
		11									
		12									
		13									
		14									
CLAYSTONE / SILTSTONE / SANDSTONE											
brown / grey / rust	SS	15	50/8"	9000+	12.0	0.9 ppm					
moderately hard		16									
		17									
		18									
		19									
CLAYSTONE											
brown / grey / rust	SS	20	50/3"	9000+	14.9	0.3 ppm					
moderately hard		21									
with occasional lignite		22									
		23									
		24									
SANDSTONE / SILTSTONE / CLAYSTONE											
brown / grey / rust	SS	25	50/9"	9000+	12.8	0 ppm					
moderately hard to hard											

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-14		SHEET 2 OF 2
RIG TYPE: CME-75	PZ DETAILS	START DATE	7/11/2017
FOREMAN: JJS		FINISH DATE	7/11/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
		26									
SANDSTONE / SILTSTONE / CLAYSTONE		27									
brown / grey / rust		28									
moderately hard to hard		29									
with occasional lignite											
with occasional gypsum crystals	SS	30	50/11"	9000+	17.3	0.2 ppm					
		31									
		32									
		33									
		34									
		35									
		36									
		37									
		38									
		39									
grey / rust	SS	40	50/5"	9000+	12.3	0 ppm					
		41									
		42									
		43									
		44									
		45									
		46									
		47									
		48									
	SS	49	50/4"	9000+	5.0	0 ppm					
BOTTOM OF BORING DEPTH 48.5'		50									

PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Note: Boring terminated at an approximate depth of 48 feet below existing site grades, a split-spoon sample was then taken from 48 to 48-1/2 feet, and the monitoring well was set with a bottom elevation of 48 feet below site grades as per Stewart Environmental Consultants request.

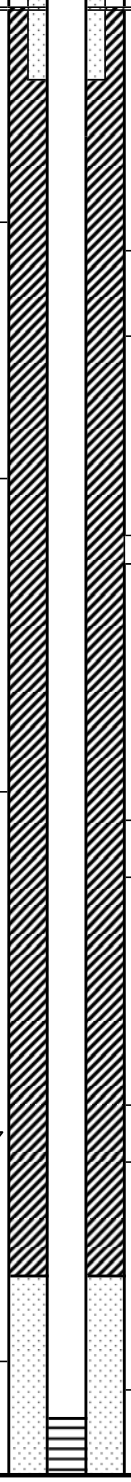
Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-15		SHEET 1 OF 2
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/6/2017
FOREMAN: JJS		FINISH DATE	7/6/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	20'
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION		1									
SANDY LEAN CLAY (CL) brown		2									
		3									
		4									
CLAYSTONE brown / rust / grey highly weathered / soft to moderately hard with occasional gypsum crystals	SS	5	42	9000+	14.0	0 ppm					
		6									
		7									
		8									
CLAYSTONE / SILTSTONE / SANDSTONE brown / rust / grey moderately hard to hard cemented zone @ ~ 9'		9									
	SS	10	50/2"	9000+	7.8	0 ppm					
		11									
		12									
		13									
		14									
SILTSTONE / SANDSTONE brown / rust / grey cemented	SS	15	50/7"	4500+	13.2	0 ppm					
		16									
		17									
		18									
		19									
	SS	20	50/4"	9000+	10.9	0 ppm					
		21									
		22									
		23									
		24									
CLAYSTONE brown / rust / grey moderately hard	SS	25	50/11"	9000+	12.9	0 ppm					



Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119			DATE: JULY 2017
	LOG OF MONITORING WELL MW-15		SHEET 2 OF 2
RIG TYPE: CME-75	PZ DETAILS	START DATE 7/6/2017	WATER DEPTH
FOREMAN: JJS		FINISH DATE 7/6/2017	WHILE DRILLING 20'
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV Not Reported	AFTER DRILLING Locked - Stewart Env.
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV. Not Reported	24 HOUR

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
CLAYSTONE brown / rust / grey moderately hard with occasional gypsum crystals		26 27 28									
grey / rust		29									
	SS	30	50/9"	9000+	13.6	0 ppm					
with coal/lignite		31 32 33 34 35									
	SS	36	50/10"	9000+	13.4	0 ppm					
		37 38 39 40									
SANDSTONE / SILTSTONE / CLAYSTONE grey / rust / brown, with occasional coal/lignite	SS		50/6.5"	8000	14.3	0 ppm					
BOTTOM OF BORING DEPTH 40.5'		41 42 43 44 45 46 47 48 49 50									

Note: Boring terminated at an approximate depth of 40 feet below existing site grades, a split-spoon sample was then taken from 40 to 40-1/2 feet, and the monitoring well was set with a bottom elevation of 40 feet below site grades as per Stewart Environmental Consultants request.

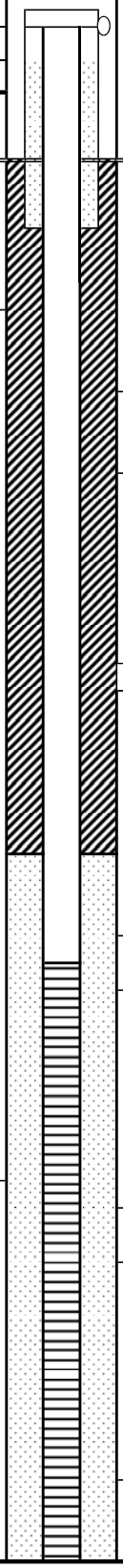
PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-16		SHEET 1 OF 2
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/6/2017
FOREMAN: JJS		FINISH DATE	7/6/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	19'
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION		1									
SANDY LEAN CLAY (CL) brown		2									
		3									
CLAYSTONE brown / grey / rust highly weathered / soft to moderately hard with occasional gypsum crystals and lignite		4									
	SS	5	15	6000	24.2	0 ppm					
		6									
		7									
		8									
		9									
	SS	10	31	9000+	16.8	0 ppm					
		11									
		12									
softer zone at approximately 12 to 13 feet		13									
		14									
	SS	15	50/7"	9000+	12.8	0 ppm					
		16									
		17									
		18									
		19									
SILTSTONE / SANDSTONE brown rust grey moderately hard / poorly cemented	SS	20	50/8"	--	18.5	5 ppm					
		21									
		22									
		23									
		24									
	SS	25	50/8"	2000	17.8	4.1 ppm					

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119								DATE:	JULY 2017			
	LOG OF MONITORING WELL MW-16							SHEET 2 OF 2				
RIG TYPE: CME-75	PZ DETAILS	SAMPLE TYPE	START DATE			7/6/2017		WATER DEPTH				
FOREMAN: JJS			FINISH DATE			7/6/2017		WHILE DRILLING			19'	
AUGER TYPE: 4-1/2" ID HSA			GROUND SURFACE ELEV			Not Reported		AFTER DRILLING			Locked - Stewart Env.	
SPT HAMMER: AUTOMATIC			TOP OF CASING ELEV.			Not Reported		24 HOUR				
SOIL DESCRIPTION			D	N	QU	MC	PID	A-LIMITS		-200	SWELL-CONSOLIDATION	
			(feet)	(BLOWS/FT)	(PSF)	(%)	VOCs	LL	PI	(%)	PRESSURE	% - 500 PSF
SILTSTONE / SANDSTONE brown rust grey moderately hard / poorly cemented			26 27 28 29									
CLAYSTONE brown / rust /grey moderately hard		SS	30	50/8"	9000+	12.3	0 ppm					
BOTTOM OF BORING DEPTH 30.5'			31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50									

Note: Boring terminated at an approximate depth of 30 feet below existing site grades, a split-spoon sample was then taken from 30 to 30-1/2 feet, and the monitoring well was set with a bottom elevation of 30 feet below site grades as per Stewart Environmental Consultants request.

PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-17		SHEET 1 OF 3
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/5/2017
FOREMAN: JJS		FINISH DATE	7/5/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION		1									
SANDY LEAN CLAY (CL) brown with occasional gravel		2 3									
SANDSTONE / SILTSTONE / CLAYSTONE brown / rust / grey highly weathered / soft to moderately hard		4									
	SS	5	35	9000+	9.8	0 ppm					
		6 7 8 9									
			50	9000+	12.7	0 ppm					
	SS	10									
		11 12 13 14									
CLAYSTONE grey / rust moderately hard with gypsum crystals											
	SS	15	50	9000+	12.2	0 ppm					
		16 17 18 19									
brown / grey / rust											
	SS	20	50/8"	9000+	11.4	0 ppm					
		21 22 23 24									
	SS	25	50/9"	9000+	10.3	0ppm					

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-17		SHEET 2 of 3
RIG TYPE: CME-75	PZ DETAILS	START DATE	7/5/2017
FOREMAN: JJS		FINISH DATE	7/5/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
		26									
CLAYSTONE grey / rust moderately hard with gypsum crystals		27									
		28									
		29									
SANDSTONE / SILTSTONE / CLAYSTONE brown / rust / grey soft to moderately hard with occasional lignite more moist zone at ~29'	SS	30	42	9000+	11.5	0 ppm					
		31									
		32									
		33									
		34									
CLAYSTONE brown / rust / grey moderately hard with occasional gypsum crystals	SS	35	50	9000+	18.6	0 ppm					
		36									
		37									
		38									
grey / rust		39									
	SS	40	50	9000+	17.6	0 ppm					
		41									
		42									
		43									
		44									
SILSTONE / SANDSTONE grey moderately hard to hard with occasional gypsum crystals with occasional calcareous deposits	SS		50/6"	--	13.6	0 ppm					
		45									
		46									
		47									
		48									
CLAYSTONE brown / grey / rust moderately hard with occasional gypsum crystals		49									
	SS	50	50/9"	9000+	19.0	0 ppm					

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-17		SHEET 3 OF 3
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/5/2017
FOREMAN: JJS		FINISH DATE	7/5/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
CLAYSTONE brown / grey / rust moderately hard with coal/lignite seams and occasional gypsum crystals		51 52 53 54									
	SS	55	52	9000+	20.6	0 ppm					
grey		56 57 58 59									
	SS	60	50/6"	9000+	15.6	0 ppm					
		61 62 63 64									
	SS	65	50/5"	9000+	12.0	0 ppm					
		66 67 68 69									
	SS	70	50/3"	9000+	10.4	0 ppm					
BOTTOM OF BORING DEPTH 70'		71 72 73 74 75									

Note: Boring terminated at an approximate depth of 69 feet below existing site grades, a split-spoon sample was then taken from 69 to 70 feet, and the monitoring well was set with a bottom elevation of 69 feet below site grades as per Stewart Environmental Consultants request.

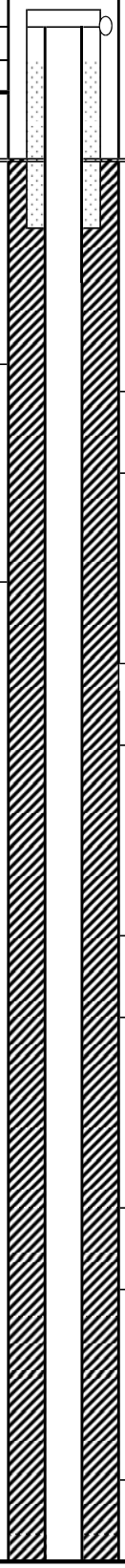
PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119			DATE: JULY 2017
	LOG OF MONITORING WELL MW-18		SHEET 1 OF 3
RIG TYPE: CME-55	PZ DETAILS	START DATE 7/6/2017	WATER DEPTH
FOREMAN: JJS		FINISH DATE 7/10/2017	WHILE DRILLING ▽ None
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV Not Reported	AFTER DRILLING ▼ Locked - Stewart Env.
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV. Not Reported	24 HOUR ▽



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION		1									
SANDY LEAN CLAY (CL) brown with occasional plastic and magnetic tape		2, 3, 4									
SANDY LEAN TO FAT CLAY (CL-CH) brown / grey / rust stiff	SS	5	15	9000+	17.1	0 ppm					
bedrock transition zone		6, 7, 8									
CLAYSTONE brown / grey / rust soft with gypsum crystals and occasional lignite		9									
	SS	10	32	9000+	13.0	0 ppm					
		11, 12, 13, 14									
	SS	15	36	9000+	20.7	0 ppm					
		16, 17, 18, 19									
	SS	20	32	9000+	21.0	0 ppm					
		21, 22, 23, 24									
with coal seams	SS	25	30	9000+	22.3	0 ppm					

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-18		SHEET 2 of 3
RIG TYPE: CME-75	PZ DETAILS	START DATE	7/6/2017
FOREMAN: JJS		FINISH DATE	7/10/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
CLAYSTONE brown / grey / rust soft with gypsum crystals and occasional lignite		26 27 28 29									
SANDSTONE / SILTSTONE / CLAYSTONE brown / grey / rust moderately hard	SS	30	50/6"	9000+	9.8	0 ppm					
cemented lense from 37'-38'		31 32 33 34 35 36 37 38 39									
SILTSTONE / SANDSTONE grey / brown / rust moderately hard to hard / poorly cemented to cemented	SS	40 41 42 43 44 45 46 47 48 49	50/6"	--	8.4	0 ppm					
	SS	50	50/3"	--	10.6	0 ppm					

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-18		SHEET 3 OF 3
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/6/2017
FOREMAN: JJS		FINISH DATE	7/10/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	

SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SILTSTONE / SANDSTONE grey / brown / rust moderately hard to hard / poorly cemented to cemented		51									
		52									
		53									
		54									
		55									
		56									
		57									
		58									
		59									
CLAYSTONE / SILTSTONE / SANDSTONE grey moderately hard / poorly cemented to cemented	SS	60	50/5"	--	9.7	0.8 ppm					
		61									
		62									
		63									
		64									
		65									
		66									
		67									
		68									
		69									
		70									
	SS	71	50/5"	9000+	11.2	1.9 ppm					
BOTTOM OF BORING DEPTH 71'		72									
		73									
		74									
		75									

Note: Boring terminated at an approximate depth of 70 feet below existing site grades, a split-spoon sample was then taken from 70 to 71 feet, and the monitoring well was set with a bottom elevation of 70 feet below site grades as per Stewart Environmental Consultants request.

PIEZOMETER LEGEND

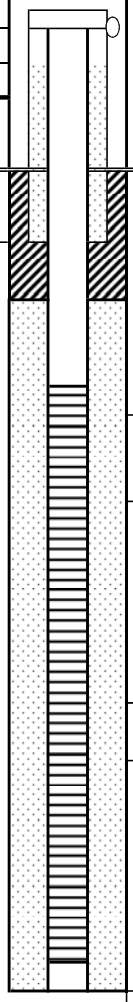
- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-19		SHEET 1 OF 1
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/13/2017
FOREMAN: JJS		FINISH DATE	7/13/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION											
SANDY LEAN CLAY; brown		1									
CLAYSTONE / SILTSTONE / SANDSTONE brown / grey / rust moderately hard to hard		2									
		3									
		4									
	SS	5	50/11"	7500	13.8	3.1 ppm					
		6									
		7									
		8									
		9									
	SS	10	50/9.5"	7000	12.6	3.3 ppm					
		11									
		12									
		13									
		14									
	SS		50/5"	5500	11.5	2.9 ppm					
BOTTOM OF BORING DEPTH 14.5'		15									
		16									
		17									
		18									
Note: Boring terminated at an approximate depth of 14 feet below existing site grades, a split-spoon sample was then taken from 14 to 14-1/2 feet, and the monitoring well was set with a bottom elevation of 14 feet below site grades as per Stewart Environmental Consultants request.		19									
		20									
		21									
		22									
		23									
		24									
		25									

PIEZOMETER LEGEND

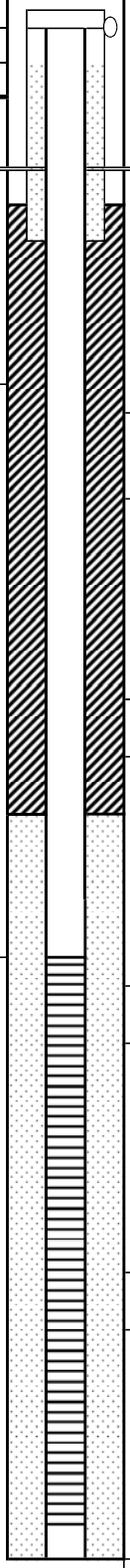
- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

ERIE LANDFILL CLOSURE - MONITORING WELL INSTALLATION
ERIE, COLORADO

PROJECT NO: 1162119		DATE:	JULY 2017
	LOG OF MONITORING WELL MW-20		SHEET 1 OF 1
RIG TYPE: CME-55	PZ DETAILS	START DATE	7/12/2017
FOREMAN: JJS		FINISH DATE	7/12/2017
AUGER TYPE: 4-1/2" ID HSA		GROUND SURFACE ELEV	Not Reported
SPT HAMMER: AUTOMATIC		TOP OF CASING ELEV.	Not Reported

WATER DEPTH	
WHILE DRILLING	None
AFTER DRILLING	Locked - Stewart Env.
24 HOUR	



SOIL DESCRIPTION	SAMPLE TYPE	D (feet)	N (BLOWS/FT)	QU (PSF)	MC (%)	PID VOCs	A-LIMITS LL	A-LIMITS PI	-200 (%)	SWELL-CONSOLIDATION PRESSURE	SWELL-CONSOLIDATION % - 500 PSF
SPARSE VEGETATION											
SANDY LEAN CLAY (CL) brown		1, 2, 3, 4									
SILTSTONE / SANDSTONE brown / grey / rust weathered / soft to moderately hard	SS	5	32	8000	21.3	0 ppm					
		6, 7, 8, 9									
	SS	10	50/8"	9000+	13.2	1.5 ppm					
		11, 12, 13, 14									
CLAYSTONE / SILTSTONE / SANDSTONE brown / grey / rust moderately hard	SS	15	50/8"	9000+	13.0	0.5 ppm					
		16, 17, 18, 19									
with occasional lignite	SS	20	50/7"	9000+	13.8	0.5 ppm					
		21, 22, 23, 24									
	SS	25	42	7500	16.0	0 ppm					
BOTTOM OF BORING DEPTH 26'											

Note: Boring terminated at an approximate depth of 24 feet below existing site grades, a split-spoon sample was then taken from 24 to 25 feet, and the monitoring well was set with a bottom elevation of 24 feet below site grades as per Stewart Environmental Consultants request.

PIEZOMETER LEGEND

- 2-Inch Diameter Flush Threaded- Schedule 40 PVC riser pipe
- Bentonite Seal
- 2-Inch Dia. Flush Threaded- Schedule 40 PVC Slotted pipe - 5'
- Silica Sand and/or Sand & Gravel Cave-In

Earth Engineering Consultants, LLC

Earth Engineering Consultants, Inc. Field Boring Log

CME-55

Log of Boring NO. MW-15 of _____ EEC Tech, Engineer JJS

Project NO. 1162119 Driller & Co. DE

@N 13:31 on 7/6/17

Sample No.	Depth or Elevation From	Depth or Elevation To	Sampling Method	Penetration Record 6"	Penetration Record 6"	Penetration Record 6"	Swell/ Cons. @ 500/100	Atterberg & -200	PID ~~Other~~ Testing	Sample Description
										Sparse Vegetation.
										brown sa ln cl.
1	4'		SS	10	17	25			0.0	brown/rust/grey Claystone (some siltstone/sandstone) w/ occ. gypsum crystals
2	9'		SS	50/2"					0.0	minimal to no recovery; brown/rust/grey interbedded cl st/si st/sa st ??
3	14'		SS	20	30/4"				0.0	brown/rust/grey siltstone/sandstone
4	19		SS	25	25/2"				0.0	——— " ———
5	24		SS	10	20	20/3"			0.0	brown/rust/grey Claystone w/ occ. gypsum crystals
6	29		SS	15	35				0.0	grey/rust Claystone
7	35		SS	25	25/4"				0.0	grey/rust claystone w/ coal/lignite.
8	40		SS	50/6½"					0.0	grey/rust/brown sandstone/si st/ cl st. w/ occ. coal/lignite
										Dave wants 15 foot of screen; w/ 30 solid
										cut ~2'5½" off top of solid.
										Sand (~~46 bags~~ ~10 bags) to ~22'3".
										bentonite (~6 + ~3 = ~9+ bags. to ~ grade. + ~½ bag for inside of lock top.

Project Name Erie Landfill Closure

Project Location Erie, Weld County, CO

Date Started 7/6/17

Date Completed 7/6/17

~~Piezometer~~ MW Installed **Yes/ No**

~~Perc. Yes/ No Presoaked: Yes/ No~~

Boulders or Obstructions At _____ To _____

Water Level Observations

WL @ WD ~~@ ~35~~ ~20'; top of PVC = ~3'1" above grade.

WL @ AB _____

WL @ ____ hrs. AB _____

Depth of Artesian Pressure _____

Height of soil rise in casing _____

Cave In: WD _____ AB _____

AB After Boring
ACR After Casing Removal
AS Auger Sample
SS Split Spoon Sampler
BCR Before Casing Removal
WD While Drilling
DCI Dry Cave In
ST California Sampler
HA Hand Auger
HS Hollow Stem Auger
WCI Wet Cave In
WL Water Level

CME-55

Earth Engineering Consultants, Inc. Field Boring Log

Log of Boring NO. MW-16 of _____ EEC Tech, Engineer _____

Project NO. 1162119 Drilled on 7/6/17 Driller & Co. _____

Sample No.	Depth or Elevation From	Depth or Elevation To	Sampling Method	Penetration Record 6"	Penetration Record 6"	Penetration Record 6"	Swell/ Cons. @ 500/100	Atterberg & -200	PID Other Testing	Sample Description: Sparse Vegetation
										Brown Sa ln clay. ΔN3'?
1	4		SS	4	6	9			0.0	brown/grey/rust claystone w/ occ. gypsum [illegible]
2	9		SS	7	9	22			0.0	——— " " ———
										Slotted @ ~12/13
3	14		SS	20	30/4				0.0	brown/grey/rust claystone.
4	19		SS	20	30/5"				5.0	brown/rust/grey silt/sa stone - bedrock; w/ * resistant water
5	24		SS	20	30/5"				4.1	brown/rust/grey ——— " " ———
6	30		SS	20	30/5"				0.0	brown/rust/grey claystone
										Dave Stewart wants 15' of slotted, w/ 6" bottom,
										w/ 20' of slotted; cut 2'5½"; top of PVC =
										~3' above grade.
										Sand (9+½ bags ≈ 9½ bags) bringing sand to ~2'4"
										bentonite (~6 bags) bringing bent to ~ grade.
										then ½ bag of sand to fill inside of lock top.

Project Name Erie Landfill Closure

Project Location Erie, Weld County, CO

Date Started 7/6/17

Date Completed 7/6/17

~~Piezometer~~ MW Installed **Yes/ No**

~~Perc. Yes/ No Presoaked Yes/ No~~

Boulders or Obstructions At _____ To _____

Water Level Observations

WL @ WD ~19'

WL @ AB _____

WL @____hrs. AB_____

Depth of Artesian Pressure _____

Height of soil rise in casing _____

Cave In: WD _____ AB _____

AB After Boring
ACR After Casing Removal
Auger Sample
Split Spoon Sampler
BCR Before Casing Removal
WD While Drilling
DCI Dry Cave In
ST California Sampler
HA Hand Auger
HS Hollow Stem Auger
WCI Wet Cave In
WL Water Level

Earth Engineering Consultants, Inc. Field Boring Log

Log of Boring NO. MW-18 of _____ EEC Tech, Engineer JSS

Project NO. 1162119 Driller & Co. DE

Sample No.	Depth or Elevation From	Depth or Elevation To	Sampling Method	Penetration Record 6"	Penetration Record 6"	Penetration Record 6"	Swell/ Cons. @ 500/100	Atterberg & -200	~~Other~~ PID Testing	Sample Description: Sparse Vegetation
										Brown sa ln cl ; w/ occ. plastic/magnetic trash.
1	4'		SS	4	6	9				brown/grey/~~rust~~ sa ln-lt cl // completely weathered bedrock ? ΔN 8'
2	9'		SS	7	12	20				brown/grey/rust Claystone w/ gypsum crystals & occ. lignite
3	14'		SS	7	15	21				— " — Claystone w/ occ. gypsum crystals & lignite
4	19'		SS	9	12	20				— " —
5	24'		SS	7	10	20				Grey/rust/brown claystone w/ coal seams
6	29'		SS	25	25/3"					brown/grey/rust sa st/si st/cl st.
									X	drilled to 34' and stopped for the day.
7	39'									

Project Name Erie Landfill Closure

Project Location Erie, Weld County, CO

Date Started 7/6/17

Date Completed _____

Piezometer Installed **Yes/ No**

Perc. **Yes/ No** Presoaked. **Yes/ No**

Boulders or Obstructions At _____ To _____

Water Level Observations

WL @ WD _____

WL @ AB _____

WL @____hrs. AB_____

Depth of Artesian Pressure _____

Height of soil rise in casing _____

Cave In: WD _____ AB _____

AB After Boring
ACR After Casing Removal
AS Auger Sample
SS Split Spoon Sampler
BCR Before Casing Removal
WD While Drilling
DCI Dry Cave In
ST California Sampler
HA Hand Auger
HS Hollow Stem Auger
WCI Wet Cave In
WL Water Level

Earth Engineering Consultants, Inc. Field Boring Log

Log of Boring NO. MW-12 of _____ EEC Tech, Engineer JJS

Project NO. 1162119 Driller & Co. DE

Sample No.	Depth or Elevation From	Depth or Elevation To	Sampling Method	Penetration Record 6"	Penetration Record 6"	Penetration Record 6"	Swell/ Cons. @ 500/100	Atterberg & -200	~~Other~~ PID Testing	Sample Description: Sparse Vegetation
										Brown sa ln cl w/ glass, plastic, wood
1	4		SS	1	1	3			9.0	brown/gray/~~black~~ sa ln-fat clay w/ glass, plastic, wood, etc — trash. water/moisture @ ~5'
2	9'		SS	2	2	3			1.5	~~brown~~ gray/rust/black sa ln-fat clay // completely weathered B.f. w/ occ. wood, plastic.
3	14'		SS	4	6	10			9.0	brown/gray/rust/black highly weathered claystone br. w/ occ. trash, lignite/coal.
4	19'		SS	10	20	20/4"			1.7	brown/gray/rust claystone br. w/ occ. lignite/coal.
5	25'		SS	20	30/6"				2.6	— " — claystone br. w/ occ. gypsum crystals
										Dave wants 20' slotted to ~5'; sand to ~3½/4'. w/ 6" sump, slotted @ ~2½-4½; w/ 10' solid cut ~2'6". Sand (~~13~~ 12 bags) to ~3'9" below grade. bent (~~1½~~ ~1/bag) to ~2" below grade. No lock-top available to place today. top of PVC = ~3' above grade

Project Name Erie L.F. Closure	Water Level Observations
Project Location Erie, Weld County, CO	WL @ WD ~5'
Date Started 7/10/17	WL @ AB _____
Date Completed 7/10/17	WL @____hrs. AB_____
~~Piezometer~~ MW Installed **Yes/ No**	Depth of Artesian Pressure _____
Perc. **Yes/ No** Presoaked. **Yes/ No**	Height of soil rise in casing _____
Boulders or Obstructions At _____ To _____	Cave In: WD _____ AB _____

AB After Boring
ACR After Casing Removal
AS Auger Sample
SS Split Spoon Sampler
BCR Before Casing Removal
WD While Drilling
DCI Dry Cave In
ST California Sampler
HA Hand Auger
HS Hollow Stem Auger
WCI Wet Cave In
WL Water Level

Earth Engineering Consultants, Inc. Field Boring Log

Log of Boring NO. MW-11 of ____ EEC Tech, Engineer JJS

Project NO. 1162119 Driller & Co. DE

Sample No.	Depth or Elevation From	Depth or Elevation To	Sampling Method	Penetration Record 6"	Penetration Record 6"	Penetration Record 6"	Swell/ Cons. @ 500/100	Atterberg & -200	~~Other~~ PID Testing	Sample Description
										Sparse Vegetation
										Brown Sa ln cl w/ occ. plastic, plywood
1	4		SS	3	1	1			0.7	gry sa ln-fat clay (completely mottled B.P.) w/ co.
2	9		SS	3	3	4			0.7	brown/rust/gry sa ln-fat clay — " —
										Δ ~12/13'
3	14		SS	15	30	10/2"			1.5	brown/gry/rust cl st/ss st/ sa st
4	20		SS	25	25/4"				0.6	— " —
										Spoke w/ Dave, 15' slotted to 5', sand to ~3'
										bent, to surface.
										w/ 6" shoe; slotted ~19½ to ~4½; w/ 10' stick;
										cut 2'5¾" from solid; top of PVC ~3'11" above grade
							10/20 Silica Sand.			→ sand (10 bags) to ~3½' below grade
										bentonite (1½ bags) to ~2" below grade.
										½ bag sand in back top

Project Name Erie Lift Closure

Project Location Erie, Weld County, CO

Date Started 7/10/17

Date Completed 7/10/17

~~Piezometer~~ MW Installed **Yes/ No**

~~Perc **Yes/ No** Presoaked **Yes/ No**~~

~~Boulders or Obstructions At ____ To ____~~

Water Level Observations

WL @ WD ~4'

WL @ AB ____

WL @ ____ hrs. AB ____

Depth of Artesian Pressure ____

Height of soil rise in casing ____

Cave In: WD ____ AB ____

AB After Boring
ACR After Casing Removal
AS Auger Sample
SS Split Spoon Sampler
BCR Before Casing Removal
WD While Drilling
DCI Dry Cave In
ST California Sampler
HA Hand Auger
HS Hollow Stem Auger
WCI Wet Cave In
WL Water Level

Earth Engineering Consultants, Inc. Field Boring Log

Log of Boring NO. MW-18 of _____ EEC Tech, Engineer JSS

Project NO. 162119 Driller & Co. DE

MD - read on 7/18

Sample No.	Depth or Elevation From	Depth or Elevation To	Sampling Method	Penetration Record 6"	Penetration Record 6"	Penetration Record 6"	Swell/ Cons. @ 500/100	Atterberg & -200	Other Testing	Sample Description
										Sparse Vegetation
										Brown sa ln cl ; w/ occ. plastic/ mg gravel
1	4'		SS	4	6	9			0.0	brown/grey/~~rust~~ sa ln-lt cl // completely weathered bedrock ? Δ N8'
2	9'		SS	7	12	20			0.0	brown/grey/rust Claystone w/ gypsum crystals & occ. lignite
3	14'		SS	7	15	21			0.0	— " — Claystone w/ occ. gypsum crystals & lignite
4	19'		SS	9	12	20			0.0	— " —
5	24'		SS	7	10	20			0.0	Grey/rust/brown claystone w/ coal seams
6	29'		SS	25	25/3"				0.0	brown/grey/rust sa st/si st/cl st.
										drilled to 34' and stopped for the day (7/6/17)
7	39'		SS	50/6"					continued on	7/10/17 hard/cemented zone (@ ~37-38) light grey/brown/ms si st/sa stone.
										some water being added by drillers; hard/hot
8	49		SS	35	15/1"				0	light grey si st/sa st.
9	59		SS	30	20/2"				0.8	light grey cl st/si st/sa st.
10	70		SS	20	30/3"				1.9	grey claystone,
										10' screen - 15' sand, per Dave;
										w/ 6" foot, screen ~69½ to ~59½; sand (~~10+~~9 bags) (w/ 6" foot)

Project Name Erie Landfill Closure

Project Location Erie, Weld County, CO

Date Started 7/6/17

Date Completed 7/10/17

~~Piezometer~~ MW Installed ~~Yes/ No~~

Perc. ~~Yes/ No~~ Presoaked. ~~Yes/ No~~

~~Boulders or Obstructions At~~ _____ ~~To~~ _____

Water Level Observations to ~53½'.

WL @ WD Ø

WL @ AB _____

WL @ ____ hrs. AB _____

Depth of Artesian Pressure top of PVC (@ ~3' above grade.

Height of soil rise in casing ~½ bag of sand in hole top

Cave In: WD _____ AB _____

Bentonite (10+5+6+1=22 bags) to ~6" below grade.

+5' solid stick. cut at 7¼" off.

AB After Boring
ACR After Casing Removal
AS Auger Sample
SS Split Spoon Sampler
BCR Before Casing Removal
WD While Drilling
DCI Dry Cave In
ST California Sampler
HA Hand Auger
HS Hollow Stem Auger
WCI Wet Cave In
WL Water Level

STEWART ENVIRONMENTAL
CONSULTING GROUP, LLC
ENGINEERING FOR LIFE

Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Abandonded

Well Number/Location Q.T.31	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	21.2
Total Well Depth from TOC (0.00 Feet)	25.6

Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:		Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location SEC MW 1	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	10'.4"
Total Well Depth from TOC (0.00 Feet)	17'.5"
Depth of Standing Water (0.00 Feet)	7'.1" x Gals/ft: 0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 1.15 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	7.43	4670	16.7	76.3	2.93		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	7.18	4588	16.4	89.1	2.15		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.11	4600	16.1	96.9	2.03		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
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Groundwater Sampling Form 8:45am

Date: 7-10	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW 1	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	10'.5"
Total Well Depth from TOC (0.00 Feet)	17'.5"
Depth of Standing Water (0.00 Feet)	0.1632 x Gals/ft: 7

2" - 0.~~0~~1632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 1.1 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO (mg/L)	Turb	
	7.27	4652	14.2	69.0	3.68	~~X~~	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	7.12	4619	14.1	75.4	2.52		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.08	4625	14.0	79.3	2.49		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments: Ze Sample

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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Abandonded **Monitoring Well Data**

Well Number/Location MW 1	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)			
Total Well Depth from TOC (0.00 Feet)	30'.6"		
Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

Dry well

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location SEC #MW2	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)			
Total Well Depth from TOC (0.00 Feet)	8'.6"		
Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments Dry well

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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location M.W 2	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	
Total Well Depth from TOC (0.00 Feet)	35'.6"
Depth of Standing Water (0.00 Feet)	x Gals/ft:

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments
Dry well

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date: 7-17-17	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW-2R	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	8'.8"		
Total Well Depth from TOC (0.00 Feet)	17'.9"		
Depth of Standing Water (0.00 Feet)	9.1	x Gals/ft:	0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 1.5 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	7.19	6.396	16.7°	88.1	4.26		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	7.17	6.323	15.8	99.8	3.63		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.22	8119	14.3	106.1	4.75		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location Abandonded MW 13	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	44'.2"
Total Well Depth from TOC (0.00 Feet)	50'.6"
Depth of Standing Water (0.00 Feet)	6'.4" x Gals/ft:

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW-13	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	17'9"
Total Well Depth from TOC (0.00 Feet)	27'1"
Depth of Standing Water (0.00 Feet)	9'2" x Gals/ft: 0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 1.5" Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	7.38	11784	15.20	110.5	7.01		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	7.36	12158	14.50	109.5	6.56		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.29	12536	14.40	112	6.46		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:	7·13	Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	MW 14	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)			
Total Well Depth from TOC (0.00 Feet)	52'		
Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments
Dry well

STEWART ENVIRONMENTAL
CONSULTING GROUP, LLC
ENGINEERING FOR LIFE

Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW-14 Abandonded	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	64.4'		
Total Well Depth from TOC (0.00 Feet)	72.1'		
Depth of Standing Water (0.00 Feet)	7.1'	x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling	Gals
3" - 0.3672	6: - 1.468	12" - 5.88		

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
CONSULTING GROUP, LLC
ENGINEERING FOR LIFE

Time 14:30

Groundwater Sampling Form

Date:		Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	MW-15	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	24'.6"		
Total Well Depth from TOC (0.00 Feet)	39'		
Depth of Standing Water (0.00 Feet)	14.4	x Gals/ft:	0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling	2.3 Gals
3" - 0.3672	6: - 1.468	12" - 5.88		

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	6.9	10823	14.3	122.8	3.65		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	6.79	10561	14.2	120.2	2.89		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	6.75	10462	14.2	119.7	2.43		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

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Groundwater Sampling Form

Date:		Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	MW-16 NCW	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	19		
Total Well Depth from TOC (0.00 Feet)	33		
Depth of Standing Water (0.00 Feet)	14	x Gals/ft:	0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 2.2 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

mg/L

1. Before Bailing	pH	Cond	Temp	ORP	DO	~~Turb~~	
	7.99	20.7	17.4°	256	16.26		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	8.0	4407	16.6	95	5.99		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.82	4763	16.4	200.4	5.75		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location M.W 16 Abandonded	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	17'.9"
Total Well Depth from TOC (0.00 Feet)	31'.8"
Depth of Standing Water (0.00 Feet)	13'.9" x Gals/ft:

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:		Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

New well

Monitoring Well Data

Well Number/Location	MW-17	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)			
Total Well Depth from TOC (0.00 Feet)	72.4*		
Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments
Dry Well

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Abandonded

Monitoring Well Data

Well Number/Location M.W 17	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	66'.7"
Total Well Depth from TOC (0.00 Feet)	70'.4"
Depth of Standing Water (0.00 Feet)	3'.7" x Gals/ft:

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW-18	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)			
Total Well Depth from TOC (0.00 Feet)	73'.3"		
Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

Dry well

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:		Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	MW-19	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	16.6'		
Total Well Depth from TOC (0.00 Feet)	18.0'		
Depth of Standing Water (0.00 Feet)	1.4'	x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 0.2 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	7.24	3860	15.50	101.4	5.01		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	7.35	3630	14.70	101.8	4.81		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.37	3306	14.50	102	4.73		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments Bailed dry, had to come back for samples

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Groundwater Sampling Form

Date: 7-13-17	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW-20	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	21'
Total Well Depth from TOC (0.00 Feet)	27'

Depth of Standing Water (0.00 Feet)	6	x Gals/ft:	0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling	0.97 Gals
3" - 0.3672	6: - 1.468	12" - 5.88		

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	7.38	5790	15.9	91.6	7.36		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	7.37	5933	13.5	101.1	7.13		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.34	6153	13.2	103.3	6.98		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

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Groundwater Sampling Form

10:50 am
7-10-17

Date: 7-10-17	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location SGC MW 3 ?	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	21.5		
Total Well Depth from TOC (0.00 Feet)	27.8		
Depth of Standing Water (0.00 Feet)	0.1632	x Gals/ft:	6.3

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 1 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	~~Turb~~	
	7.11	11781	14.4	112.1	2.14		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	~~Turb~~	
	6.97	12064	14.1	112.5	2.05		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	~~Turb~~	
	6.91	12077	14.2	115.4	1.84		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments right next to MW 3A but not labeled

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Groundwater Sampling Form

Date:		Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	SEC MW 3A	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)			
Total Well Depth from TOC (0.00 Feet)	17.3'		
Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments
Dry well

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:		Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	MW-4	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	9'7"		
Total Well Depth from TOC (0.00 Feet)	28'		
Depth of Standing Water (0.00 Feet)	18.3	x Gals/ft:	~~2.9~~ 0.16.32

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 2.9 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP 634.9 mmHg	DO	Turb	
	7.10	4428	17.0°	161.6 mV	0.21 mg/L		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP mV	DO	Turb	
	7.14	4631	16.8	112.2	0.79	mg/L	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP mV	DO	Turb	
	7.12	4698	16.7	108.9	0.88		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

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Groundwater Sampling Form

Date:	7-10-17	Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	MW 5	Lock #	
Date Constructed:		Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	15.9		
Total Well Depth from TOC (0.00 Feet)	17.9		
Depth of Standing Water (0.00 Feet)	2	x Gals/ft:	0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 0.3 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	7.45	8992	18.7	-15.3	3.12		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	7.43	9112	18.41	-2.7	2.79		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	7.41	9342		2.3	2.32		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments Bailed dry 1st sample had to go back to collect samples on 12th

STEWART ENVIRONMENTAL
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Time 13:15

Groundwater Sampling Form

Date: 7-10-17	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW 6	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	11.9'		
Total Well Depth from TOC (0.00 Feet)	22.5'		
Depth of Standing Water (0.00 Feet)	10.6	x Gals/ft:	0.16032

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 1.7 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	6.8	7954	14.4	1.1	2.26		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	6.79	6808	14.3	-14.5	1.86		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	6.8	6480	14.3	-25.8	1.84		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW-7	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	
Total Well Depth from TOC (0.00 Feet)	28'

Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments
Dry well

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW.8	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)			
Total Well Depth from TOC (0.00 Feet)	27'9"		
Depth of Standing Water (0.00 Feet)		x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments
Dry well

STEWART ENVIRONMENTAL
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Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Abandoned

Well Number/Location M.W #8	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	9'.1"
Total Well Depth from TOC (0.00 Feet)	26'.6"
Depth of Standing Water (0.00 Feet)	17'.5" x Gals/ft:

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

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ENGINEERING FOR LIFE

Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

MW 12 stake was a couple ft. away

Well Number/Location MW 9	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	6'.5"		
Total Well Depth from TOC (0.00 Feet)	21'.10"		
Depth of Standing Water (0.00 Feet)	14'.6"	x Gals/ft:	

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling
3" - 0.3672	6: - 1.468	12" - 5.88	Gals

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments
Dry well

STEWART ENVIRONMENTAL
CONSULTING GROUP, LLC
ENGINEERING FOR LIFE

Groundwater Sampling Form

Date:	7-11-17	Job No:	
Client:	Stratus Companies	Project Name:	Phase 2 - Nature and Extent
Project Mgr	DRS	Samplier:	JRS

Monitoring Well Data

Well Number/Location	MW-11	Lock #	
Date Constructed:	7-10-17	Installed Depth (0.00 Feet)	
Screened Interval:	to	Elevation (Top of Casing)	
Casing Dia (inch)		TOC from Ground Surface (0.00 Feet)	

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	7.1"		
Total Well Depth from TOC (0.00 Feet)	23'		
Depth of Standing Water (0.00 Feet)	15.9"	x Gals/ft:	0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling	2.6 Gals
3" - 0.3672	6: - 1.468	12" - 5.88		

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	7.0	3446	17.1	105.6	2.8		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	6.99	3335	16.7	84.4	~~2.54~~	2.15	
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	6.99	3299	16.5	66.8	2.12		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

STEWART ENVIRONMENTAL
CONSULTING GROUP, LLC
ENGINEERING FOR LIFE

Groundwater Sampling Form

Date:	Job No:
Client: Stratus Companies	Project Name: Phase 2 - Nature and Extent
Project Mgr DRS	Samplier: JRS

Monitoring Well Data

Well Number/Location MW. 12	Lock #
Date Constructed:	Installed Depth (0.00 Feet)
Screened Interval: to	Elevation (Top of Casing)
Casing Dia (inch)	TOC from Ground Surface (0.00 Feet)

Observed Well Data

Initial Depth to Water from TOC (0.00 Feet)	5'.2"
Total Well Depth from TOC (0.00 Feet)	28'
Depth of Standing Water (0.00 Feet)	~~28~~ 22'.8" x Gals/ft: 0.1632

2" - 0.01632	4" - 0.6528	10" - 4.08	Three Well Volumes before Sampling 3.7 Gals
3" - 0.3672	6: - 1.468	12" - 5.88	

Free Product: Yes/No - Depth and Description	

Field Data

1. Before Bailing	pH	Cond	Temp	ORP	DO	Turb	
	6.75	4923	18.2°	36.9	1.26		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

2. Mid Point	pH	Cond	Temp	ORP	DO	Turb	
	6.73	4955	17°	42.7	0.53		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

3. Before Sampling	pH	Cond	Temp	ORP	DO	Turb	
	6.78	5035	~~17°~~ 17°	35.6	0.38		
Volume to Midpoint:		Gals	Bailed Acutal			Gal	

Comments

CHAIN OF CUSTODY RECORD

Batch: 2H56586

STEWART ENVIRONMENTAL CONSULTANTS, INC.
3801 Automation Way, Suite 200, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

PAGE ____ OF ____

SEC USE ONLY
Client No.

CLIENT: **Stratus Companies - Stewart Labs**

SAMPLER
Name: James Stewart
Signature:

Sample No.	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	CLIENT SAMPLE IDENTIFICATION	Matrix Type	QC Report Needed	Total No. of Cont.	ANALYSES REQUESTED
S10- 188								
1038	7.6.17	13:30	G	M.W.-16	WW	Y	8	**Method 8260 (see back of COC) - SL**
								Metals - (see back of COC) SL
								Inorganic Analysis (see back of COC) - SL

Compliance samples may require you to report the temperature of samples as they arrive in the laboratory. Would you like the temperature of samples recorded upon receipt by the laboratory? *Please check*. _____ **Yes**, record and report temperature. _____ **No**, temperature not requested.

Leaving this field blank implies that the incoming temperature is not requested.

RELINQUISHED BY	DATE / TIME	Received by	Date / Time
	7.6.17 18:20		7/6/17 18:20
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By JDM		Date 7/7/17	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = Liquid
S = soil SL = sludge
A = Air SD = Solid

CDPHE REPORT REQUIRED

PWSID #

Sample Kit Sent? Yes / No

REPORT TO:
PHONE:
FAX:
CLIENT:
ADDRESS:
CITY, STATE ZIP:
INVOICE TO:
ADDRESS:
CITY, STATE ZIP:

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, INC.
3801 Automation Way, Suite 200, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (

Batch:

PAGE ____ OF ____

EC USE ONLY
Client No.

CLIENT: **Stratus Companies - ACZ**

SAMPLER
Name: James Stewart
Signature:

Sample No. S10-	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	CLIENT SAMPLE IDENTIFICATION	Matrix Type	QC Report Needed	Total No. of Cont.	ANALYSES REQUESTED
	7-6-17	13:30	G	M.W.16	WW	Y	8	Method 8270 (see back of COC) - ACZ
								Method 8015 (see back of COC) - ACZ
								Total Organic Carbon - ACZ

Compliance samples may require you to report the temperature of samples as they arrive in the laboratory. Would you like the temperature of samples recorded upon receipt by the
Leaving this field blank implies that the incoming temperature is not requested.

RELINQUISHED BY	DATE / TIME	Received by	Date / Time
	07-6-17 16:35	CTE 7/6/17	4:40
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By		Date	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = Liquid
S = soil SL = sludge
A = Air SD = Solid

PWSID #

Sample Kit Sent? Yes / No

REPORT TO:
PHONE:
FAX:
CLIENT:
ADDRESS:
CITY, STATE ZIP:
INVOICE TO:
ADDRESS:
CITY, STATE ZIP:

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, INC.
2600 Canton Ct, Unit C, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

Batch: 2456642

PAGE ____ OF ____

SEC USE ONLY
Client No.

CLIENT: **Stratus Companies - Stewart Labs**

SAMPLER
Name: James Stewart
Signature:

Sample No.	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	CLIENT SAMPLE IDENTIFICATION	Matrix Type	QC Report Needed	Total No. of Cont.	ANALYSES REQUESTED
S10-193								
115C	7-10-17	14:30	G	MW-15	NN	Y	5	**Method 8260 (see back of COC) - SL**
								Metals - (see back of COC) SL
								Inorganic Analysis (see back of COC) - SL

Compliance samples may require you to report the temperature of samples as they arrive in the laboratory. Would you like the temperature of samples recorded upon receipt by the laboratory? *Please check*. _____ **Yes**, record and report temperature. _____ **No**, temperature not requested.

Leaving this field blank implies that the incoming temperature is not requested.

RELINQUISHED BY	DATE / TIME	Received by	Date / Time
	7-10-17 19:00		7/11/17 10:00
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By: JDM		Date: 7/12/17	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = Liquid
S = soil SL = sludge
A = Air SD = Solid

CDPHE REPORT REQUIRED

PWSID #

Sample Kit Sent? Yes / No

REPORT TO:
PHONE:
FAX:
CLIENT:
ADDRESS:
CITY, STATE ZIP:
INVOICE TO:
ADDRESS:
CITY, STATE ZIP:

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, INC.
3801 Automation Way, Suite 200, Fort Collins, CO 80525

10

Batch:

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

PAGE ____ OF ____

SEC USE ONLY
Client No.

CLIENT: **Stratus Companies - Stewart Labs**

SAMPLER
Name: James Stewart
Signature:

Sample No. S10-	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	CLIENT SAMPLE IDENTIFICATION	Matrix Type	QC Report Needed	Total No. of Cont.	ANALYSES REQUESTED
	7-10-17	14:30	G	MW-15	WW	Y	8	**Method 8260 (see back of COC) - SL**
								Metals - (see back of COC) SL
								Inorganic Analysis (see back of COC) - SL

Compliance samples may require you to report the temperature of samples as they arrive in the laboratory. Would you like the temperature of samples recorded upon receipt by the laboratory? *Please check* ____ **Yes**, record and report temperature. ____ **No**, temperature not requested.

Leaving this field blank implies that the incoming temperature is not requested.

RELINQUISHED BY	DATE / TIME	Received by	Date / Time
	7-10-17 16:30	CTF 7/10/17	1630
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By		Date	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = Liquid
S = soil SL = sludge
A = Air SD = Solid

CDPHE REPORT REQUIRED

PWSID #

Sample Kit Sent? Yes / No

REPORT TO:
PHONE:
FAX:
CLIENT:
ADDRESS:
CITY, STATE ZIP:
INVOICE TO:
ADDRESS:
CITY, STATE ZIP:

Sample Receipt Checklist

STEWART ENVIRONMENTAL CONSULTANTS, LLC.
2600 Canton Ct, Unit C, Fort Collins, CO 80525

Client: Stratus Initials: JDM Date: 7/6/17 Time: 18:20 MST/MDT

	To be filled out by laboratory courier, if applicable:	Yes	No	NA
1	Were samples retrieved by a laboratory courier?	✓		
2	Were samples on ice or in a refrigerated state upon retrieval?	✓		

Courier Initials: JA Date: 7-6-17 Time: 18:20

	To be filled out by laboratory sample receiving:			
3	Shipping container/cooler intact?			✓
4	Chain of Custody (COC) present?	✓		
5	Sample bottles intact? *	✓		
6	Samples on blue-ice?		✓	
7	Samples on wet ice?	✓		
8	Samples received within 4 hours of sampling?			

9 Record temperature of sample bottles within cooler with infra-red thermometer.

Container #				
Temp °C	17.6			

		Yes	No	NA
10	Sample thawed and free of any ice? *	✓		
11	COC complete, legible, signed and dated?	✓		
12	Labels on bottles complete and legible? *	✓		
13	COC in agreement with sample bottle labels? *	✓		
14	Proper container used for analyses requested? *	✓		
15	Samples requiring preservation preserved correctly? *	✓		
16	Sufficient sample volume for analyses requested? *	✓		
17	Samples within holding times for analyses requested? *	✓		
18	Samples requiring no headspace are free of headspace? *			✓

(VOC, TVPH, BTEX, Ethanol, Radon) If no, size of bubble: _____ < green pea, _____ > green pea

* If no, document on Chain of Custody.

Notes: _____

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, INC.
2600 Canton Ct, Unit C, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

Batch: 249642

PAGE ____ OF ____

SEC USE ONLY
Client No. 4482

CLIENT: **Stratus Companies - Stewart Labs**

SAMPLER
Name: James Stewart
Signature:

Sample No. S10-193	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	CLIENT SAMPLE IDENTIFICATION	Matrix Type	QC Report Needed	Total No. of Cont.	ANALYSES REQUESTED
1152	7-10-17	13:15	G	MW-6	WW	Y	5	**Method 8260 (see back of COC) - SL**
								Metals - (see back of COC) SL
								Inorganic Analysis (see back of COC) - SL

Compliance samples may require you to report the temperature of samples as they arrive in the laboratory. Would you like the temperature of samples recorded upon receipt by the laboratory? *Please check*. _____ **Yes**, record and report temperature. _____ **No**, temperature not requested.

Leaving this field blank implies that the incoming temperature is not requested.

RELINQUISHED BY	DATE / TIME	Received by	Date / Time
	7-10-17 19:00		7/11/17 10:00
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By: DJM		Date: 7/12/17	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = Liquid
S = soil SL = sludge
A = Air SD = Solid

CDPHE REPORT REQUIRED

PWSID #

Sample Kit Sent? Yes / No

REPORT TO:
PHONE:
FAX:
CLIENT:
ADDRESS:
CITY, STATE ZIP:
INVOICE TO:
ADDRESS:
CITY, STATE ZIP:

CHAIN OF CUSTODY RECORD

STEWART ENVIRONMENTAL CONSULTANTS, INC.
3801 Automation Way, Suite 200, Fort Collins, CO 80525

Telephone: (970) 226-5500
Facsimile: (970) 226-4946

Batch:

PAGE ____ OF ____

SEC USE ONLY Client No.	CLIENT: **Stratus Companies - Stewart Labs**							SAMPLER Name: James Stewart Signature:
Sample No. **S10-**	SAMPLE COLLECTION INFO Date	Time	Grab / Comp	CLIENT SAMPLE IDENTIFICATION	Matrix Type	QC Report Needed	Total No. of Cont.	ANALYSES REQUESTED
	7-10-17	13:15	G	MW-6	WW	Y	8	**Method 8260 (see back of COC) - SL**
								Metals - (see back of COC) SL
								Inorganic Analysis (see back of COC) - SL

Compliance samples may require you to report the temperature of samples as they arrive in the laboratory. Would you like the temperature of samples recorded upon receipt by the laboratory? *Please check*. _____ **Yes**, record and report temperature. _____ **No**, temperature not requested.

Leaving this field blank implies that the incoming temperature is not requested.

RELINQUISHED BY	DATE / TIME	Received by	Date / Time
	7-10-17 16:30	CTF 7/10/17	16:30
Relinquished by	Date / Time	Received by	Date / Time
Relinquished by	Date / Time	Received by	Date / Time
Database Entry By		Date	

REQUESTED COMPLETION DATE

MATRIX TYPE
WW = waste water
DW = drinking water
L = Liquid
S = soil SL = sludge
A = Air SD = Solid

CDPHE REPORT REQUIRED

PWSID #

Sample Kit Sent? Yes / No

REPORT TO:	PHONE:
	FAX:
CLIENT:	
ADDRESS:	
CITY, STATE ZIP:	
INVOICE TO:	
ADDRESS:	
CITY, STATE ZIP:	