ANNUAL PROGRESS REPORT FOR THE POST REMEDIATION CARE OF THE GROUNDWATER REMEDIATION SYSTEM AT THE VIANT COLLEGEVILLE SITE

Viant Collegeville LLC. (formerly UTI Holdings, LLC) 200 West Seventh Ave., Trappe, PA

MAY 2019

Prepared by: Marks Environmental, Inc. 140 Bollinger Road Elverson, PA 19520

SECTION 1 INTRODUCTION

Viant Collegeville LLC. (Viant) formerly UTI Holdings LLC (UTI), has been actively remediating groundwater at their Collegeville, Pennsylvania facility located at 200 West 7th Ave., Trappe Borough, Montgomery County, Pennsylvania (site) since 1978. The site is approximately 40 acres in size.

Since 1992 remediation has been conducted under an Administrative Order on Consent, Docket No. RCRA-III-055-CA, executed by Owner and the United States Environmental Protection Agency (USEPA) in March, 1992 (Consent Order). Because the groundwater contamination at the site had been determined to be primarily present within the fractured bedrock (Brunswick Formation), and has historically involved the presence of dense non-aqueous phase liquid (DNAPL) contaminants (trichloroethylene [TCE] and 1,1,1 trichloroethane [TCA]), in 2010 Viant began discussions with the USEPA to allow the consideration of a Technical Impracticability (TI) Waiver for the site. A TI Waiver would allow the establishment of alternative points of compliance (POCs) for the site.

Viant submitted the *Technical Impracticability Determination for Groundwater Remediation, Accellent Inc., Montgomery County, Collegeville, PA* (TI Waiver Request), prepared by Marks Environmental, Inc., in June 2012. The USEPA approved the TI Waiver request for the site on August 22, 2013. A TI Zone was established, within which, attainment was deemed to be technically impracticable. POCs to facilitate ongoing groundwater monitoring, were established outside of the TI Zone.

A Post-Remediation Care Plan (PRCP) was finalized in June 2018. The PRCP presents the groundwater monitoring and routine operation and maintenance (O&M) requirements for the ongoing operation of the Site groundwater extraction system. Sampling and reporting requirements, and an environmental covenant (EC), that will ensure the continued protection of human health and the environment, are also included in the PRCP. The Consent Order that previously held requirements for the site remediation and monitoring, was terminated by the USEPA on February 7, 2019. Together, the PRCP and the EC provide an enforceable mechanism for the continued operation of the groundwater pump and treat system.

The PRCP was conditionally approved by the USEPA on November 20, 2015 (exclusive of the EC) and the site groundwater monitoring and reporting has been conducted under the PRCP requirements beginning in May 2016.

This Annual Progress Report has been prepared in accordance with the reporting requirements of the PRCP and covers the period from March 2018 through February 2018. Sampling of POC monitoring wells and the TI Zone monitoring wells at the site is required annually.

The sampling requirements and well designations are summarized in Table 1 below:

Well	Sampling Frequency	Sample Parameters and Analysis		
		Compound	EPA Analytical Method	
	Point	of Compliance Wells		
UTM-4	Annual	TCE/TCA	8260B	
UTM-7	Annual			
UTM-9	Annual			
UTM-21	Annual			
UTM-23	Annual			
		TI Zone	e Monitoring Wells	
UTM-1	Annual	TCE/TCA	8260B	
UTM-6	Annual			
UTM-8	Annual			
UTM-10	Annual			
UTM-11	Annual			
UTM-14	Annual			
UTM-17	Annual			
UTM-20	Annual			
UTM-22	Annual			
		QA/QC Samples		
Trip Blank	One per shipment	TCE/TCA	8260B	

Table 1 - Annual Groundwater Monitoring Sample Collection Locations

Figure 1 shows the locations of the POC and TI Zone monitoring wells. The annual groundwater sampling was conducted on February 25 and 26, 2019 consistent with the PRCP. The condition of the well network at the site is good. All monitoring wells have locked steel protective casings.

Sampling was performed using the low-flow sampling method (EPA, Puls and Barcelona, 1995), consistent with historic sampling at the site. A trip blank was submitted to the laboratory for quality assurance/quality control (QA/QC) purposes for each shipment of samples. All samples

were placed into a pre-chilled cooler and submitted under chain-of-custody documentation to a Pennsylvania-certified analytical laboratory (currently TestAmerica Pittsburgh Laboratory) for TCE/TCA analysis in accordance with USEPA Method 8260B.

Pre-purge water levels and groundwater table elevation for 12 on-site monitoring wells and the two groundwater extraction wells (during pumping conditions) are included in Table 2. Measured water levels include a pre-purge measurement on each of the sampled monitoring wells, and measured water level in an unsampled monitoring well UTM-16. The water level in UTM-16 is required as part of the monthly water level measurements required by Viant's Delaware River Basin Commission (DRBC) groundwater withdrawal permit. Table 2 also includes the total depth of each on-site monitoring well, the surveyed measuring point reference elevation in feet above mean sea level (ft. msl), and the calculated groundwater elevation for each of the wells for which water level measurements were taken.

	M D DI			Groundwater	
	Meas. Pt. Elev.	Date	DTW	Elevation	Total Well
Well ID	(ft MSL)	of Meas.	(ft. TOIC)	(ft MSL)	Depth (ft BGS)
UTM-1	311.98	2/26/2019	126.28	185.70	200
UTM-2	309.37	NA	NM	NM	146
UTM-3	296.50	NA	NM	NM	146
UTM-4	310.49	2/26/2019	86.78	223.71	146
UTM-5	300.16	NA	NM	NM	146
UTM-6	285.13	2/26/2019	18.69	266.44	146
UTM-7	287.41	2/26/2019	25.34	262.07	100
UTM-8	304.86	2/26/2019	37.34	267.52	145
UTM-9	322.40	2/26/2019	24.42	297.98	86
UTM-10	303.35	2/25/2019	37.59	265.76	55
UTM-11	293.99	2/26/2019	81.82	212.17	100
UTM-12	297.91	NA	NM	NM	86
UTM-13	298.86	NA	NM	NM	50
UTM-14	273.50	2/26/2019	9.02	264.48	50
UTM-15	298.02	NA	NM	NM	150
UTM-16	283.87	2/26/2019	13.61	270.26	75
UTM-17	284.53	2/26/2019	33.00	251.53	153
UTM-18	277.52	NA	NM	NM	453
UTM-19	306.81	NA	NM	NM	72
UTM-20	288.84	2/25/2019	36.90	251.94	150
UTM-21	306.49	2/25/2019	50.35	256.14	150
UTM-22	302.20	2/26/2019	51.92	250.28	150
RCRA-1	302.47	NA	NM	NM	86
RCRA-2	296.64	NA	NM	NM	49
RCRA-3	300.52	NA	NM	NM	43
RCRA-4	300.62	NA	NM	NM	78

Table 2 - 2019 ANNUAL SAMPLING EVENT GROUNDWATER ELEVATIONS

Notes:

MSL - Mean Sea Level

TOIC - Top of Inner Casing

NM - Not Measured

NA - Not applicable

SECTION 2 RESULTS

Groundwater Quality

The results from the annual sampling of the POC wells and the TI Zone wells, are summarized in Tables 3 and 4, respectively .

	Feb.	Feb. 2019		
WELL #	ТСЕ	ТСА		
UTM-4	1.3	1U		
UTM-7	1U	1U		
UTM-9	1U	1U		
UTM-21	1U	1U		
UTM-23	1U	1U		

NOTES:

All concentrations reported in micrograms per liter (μ g/L).

U - Not detected, reporting limit shown

NA - Not Analyzed

J - Result is an estimated value below the laboratory reporting limit.

	Feb. 2019		
WELL #	ТСЕ	TCA	
UTM-1	1500	82J	
UTM-6	1U	1U	
UTM-8	1U	1U	
UTM-10	2.6	0.87J	
UTM-11	62	30	
UTM-14	1.3	1U	
UTM-17	11	10	
UTM-20	1U	1U	
UTM-22	2.2	1U	

Table 4 – TI Zone Groundwater Monitoring Results

NOTES:

All concentrations reported in micrograms per liter (μ g/L).

U - Not detected, reporting limit shown

NA - Not Analyzed

J - Result is an estimated value below the laboratory reporting limit.

As seen in Table 2, there were no exceedances of the USEPA Maximum Contaminant Level (MCL) for any of the POCs during the reporting period covered in this report. The TI Zone

monitoring wells detected TCE and TCA at concentrations consistent with past sampling events. The TCE and TCA concentrations continue to show a long-term decreasing trend in the site groundwater.

The laboratory analytical report is included in Appendix A.

Statistical Analysis

In accordance with the PRCP, any POC that had an exceedance of an MCL during the last eight sampling rounds, will be statistically evaluated to determine whether the statistical average (95% Upper Confidence Level [UCL]) exceeds the MCL. In the event of a non-detect the laboratory reporting limit is used as the value for the purpose of statistical analysis. The statistical evaluation is discussed below.

Only one of the five POC monitoring wells (UTM-4) had an exceedance of an MCL during the last 8 sampling rounds. TCE was detected in UTM-4 at a concentration of 11 micrograms per liter (ug/L) in February 2016. The MCL for TCE is 5 ug/L.

The statistical analysis of these data are included in Appendix B to this report. This intra-well analysis found the 95% UCL for TCE in POC monitoring well UTM-4 is 4.78, below the MCL for this compound. Therefore, no further action is necessary. Sampling of all monitoring wells will continue on an annual basis in accordance with the PRCP. The next groundwater sampling round is scheduled for February 2020.

Groundwater Recovery and Influent/Effluent Monitoring

Groundwater recovery from the two recovery wells, UTM-1 and UTM-11, continued throughout the reporting period, pursuant to Section VI.A.2 of the Consent Order. The two recovery wells operated continuously, with the exception of minor down time for system maintenance. Minor repairs and upgrades of equipment (system shutdowns of less than 8 hours duration) were made during the reporting period. The primary recovery well UTM-1 typically pumps at a rate between 30 and 55 gallons per minute (gpm), depending upon the water table elevation. Secondary recovery well UTM-11 typically pumps at a rate between 9 and 15 gpm since the modification (deepening) of this well in September 2015.

The monthly sampling of the air stripper influent and effluent continued in compliance with Section VI.A.3 of the Consent Order. The quarterly and bimonthly sampling and analysis of Outfall 002 (discharge from the stripping tower) has continued in accordance with Viant's National Pollutant Discharge Elimination System (NPDES) permit (No. PA0042617). There were no exceedances of the NPDES permit limits during the reporting period covered in this annual report.

Water levels continue to be measured monthly at nine on-site monitoring wells in accordance with the DRBC permit (Docket No. D-93-61 (G)-2) for groundwater extraction at the site. There were no exceedances of the withdrawal limits in the DRBC permit during the reporting period covered in this annual report.

Activity Planned for 2019/2020:

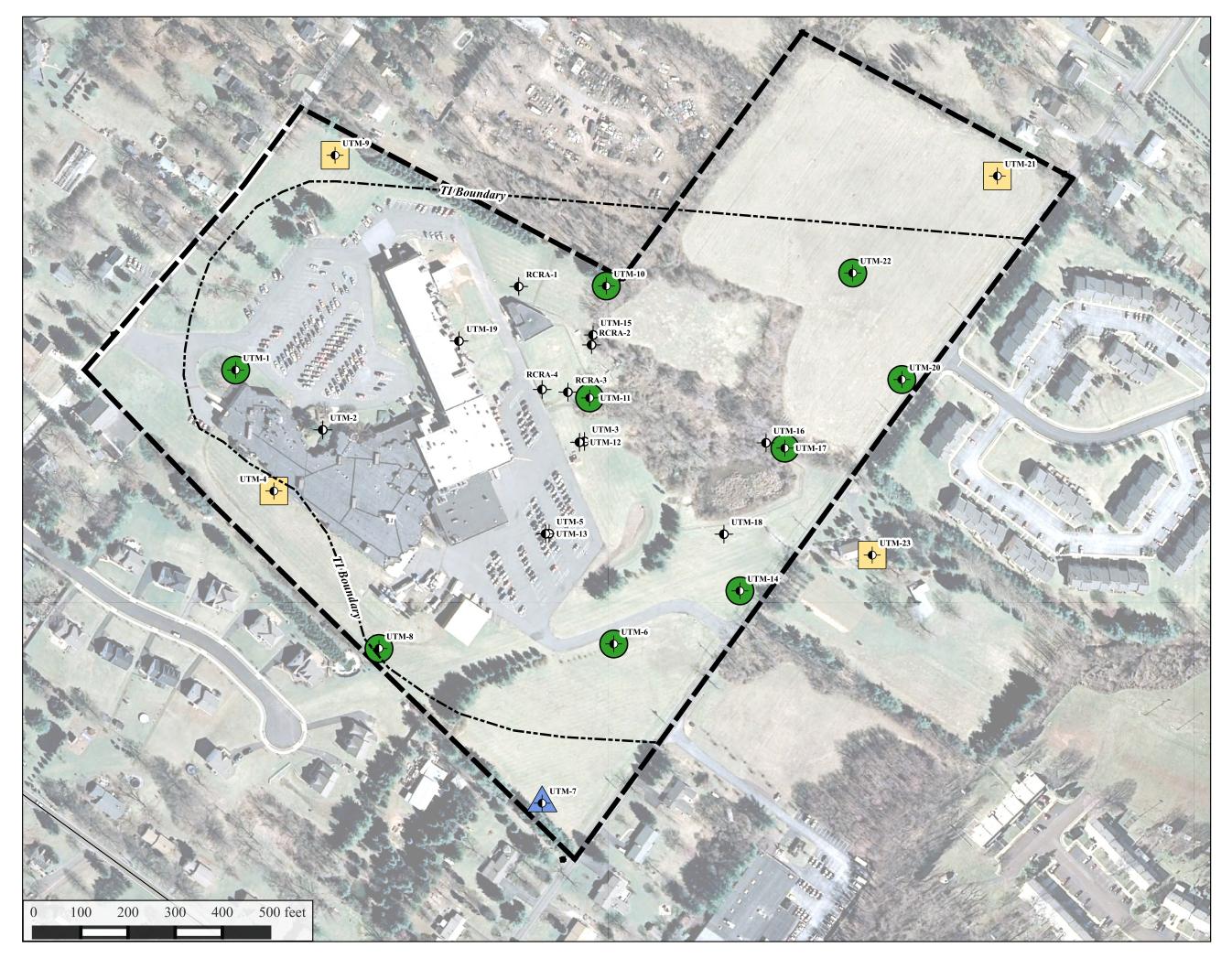
Viant will continue the operation and maintenance of the groundwater recovery system during the 2019/2020 reporting period. The Annual Groundwater Sampling Round will be conducted during February of 2020.

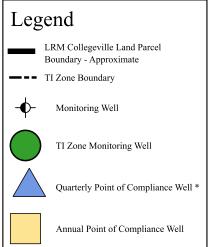
The quarterly NPDES effluent sample from Outfall 002 will be collected during the 2019/2020 reporting period in accordance with Viant's NPDES permit. Monthly water levels will continue to be measured at the site during the 2019/2020 reporting period in accordance with Viant's DRBC permit.

REFERENCES CITED

- Puls, R.W. and M.J. Barcelona, December 1995, Low-Flow (Minimal Drawdown) Groundwater Sampling Procedures, United States Environmental Protection Agency (USEPA), EPA/540/5-95/504.
- Marks Environmental, Inc., June 11, 2012; Request for Technical Impracticability Determination for Groundwater Remediation, Accellent Inc., Montgomery County, Collegeville, PA.

Figures





* Quarterly sampling for four quarters, then revert to annual sampling thereafter





Figure 1

Post-Remediation Groundwater Monitoring Points

Collegeville Pennsylvania Facility Lake Region Medical Appendix A

Laboratory Analytical Reports



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh 301 Alpha Drive RIDC Park Pittsburgh, PA 15238 Tel: (412)963-7058

TestAmerica Job ID: 180-87124-1 Client Project/Site: Marks, Viant

For:

Marks Environmental, Inc. 140 Bollinger Road Elverson, Pennsylvania 19520

Attn: Mr. Tom Marks

Authorized for release by: 3/7/2019 10:12:37 AM David Dunlap, Senior Project Manager (412)963-2432 david.dunlap@testamericainc.com

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.

PA Lab ID: 02-00416

······ Links ······

Review your project results through

Total Access

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Ask-

The

www.testamericainc.com

Visit us at:

Expert

Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	11
QC Sample Results	16
QC Association Summary	19
Chain of Custody	20
Receipt Checklists	22

Laboratory: TestAmerica Pittsburgh

Job ID: 180-87124-1

TestAmerica Job ID: 180-87124-1

Narrative

Job Narrative 180-87124-1

Receipt

The samples were received on 2/28/2019 8:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

GC/MS VOA

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: UTM-1 (180-87124-1), UTM-11 (180-87124-8) and its matrix spikes. Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The recovery of surrogate 1,2-dichloroethane-d4 was above the control limits for the following sample: UTM-6 (180-87124-3). As the surrogate recovery was high and there were no target analytes detected in the sample, the results were reported.

Method(s) 8260C: The matrix spike (MS) recoveries and the recovery of surrogate toluene-d8 for sample UTM-11 (180-87124-8) were below the control limits. The recoveries of the matrix spike duplicate (MSD) and the RPDs between the spikes were within the control limits.

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

1 2 3 4 5 7 8 9

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description	4
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.	 5
Х	Surrogate is outside control limits	J
F1	MS and/or MSD Recovery is outside acceptance limits.	

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	jč
%R	Percent Recovery	
CFL	Contains Free Liquid	8
CNF	Contains No Free Liquid	
DER	Duplicate Error Ratio (normalized absolute difference)	
Dil Fac	Dilution Factor	
DL	Detection Limit (DoD/DOE)	
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample	
DLC	Decision Level Concentration (Radiochemistry)	
EDL	Estimated Detection Limit (Dioxin)	
LOD	Limit of Detection (DoD/DOE)	
LOQ	Limit of Quantitation (DoD/DOE)	
MDA	Minimum Detectable Activity (Radiochemistry)	
MDC	Minimum Detectable Concentration (Radiochemistry)	
MDL	Method Detection Limit	
ML	Minimum Level (Dioxin)	
NC	Not Calculated	
ND	Not Detected at the reporting limit (or MDL or EDL if shown)	
PQL	Practical Quantitation Limit	
QC	Quality Control	
RER	Relative Error Ratio (Radiochemistry)	
RL	Reporting Limit or Requested Limit (Radiochemistry)	
RPD	Relative Percent Difference, a measure of the relative difference between two points	
TEF	Toxicity Equivalent Factor (Dioxin)	
TEQ	Toxicity Equivalent Quotient (Dioxin)	

Client: Marks Environmental, Inc. Project/Site: Marks, Viant

5

Laboratory: TestAmerica Pittsburgh

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-19

Sample Summary

Matrix

Water

Client: Marks Environmental, Inc. Project/Site: Marks, Viant

Client Sample ID

UTM-1

UTM-4

UTM-6

UTM-7

UTM-8

UTM-9

UTM-10

UTM-11

UTM-14

UTM-17

UTM-20

UTM-21

UTM-22

UTM-23

TRIP BLANK 1

Lab Sample ID

180-87124-1

180-87124-2

180-87124-3

180-87124-4

180-87124-5

180-87124-6

180-87124-7

180-87124-8

180-87124-9

180-87124-10

180-87124-11

180-87124-12

180-87124-13

180-87124-14

180-87124-15

TestAmerica Job ID: 180-87124-1

02/26/19 18:05 02/28/19 08:45

02/26/19 16:45 02/28/19 08:45 02/26/19 12:25 02/28/19 08:45

02/26/19 12:23 02/28/19 08:45

02/26/19 16:28 02/28/19 08:45

02/26/19 14:42 02/28/19 08:45

02/25/19 11:10 02/28/19 08:45 02/26/19 17:40 02/28/19 08:45

02/26/19 10:20 02/28/19 08:45 02/26/19 09:29 02/28/19 08:45

02/25/19 15:45 02/28/19 08:45 02/25/19 14:52 02/28/19 08:45

02/25/19 13:15 02/28/19 08:45

02/26/19 18:30 02/28/19 08:45

02/26/19 08:00 02/28/19 08:45

Collected

5
6
8
9

Received

Client: Marks Environmental, Inc. Project/Site: Marks, Viant

1-1	
_	
	5
	7
	8
	9

Method	Method Description	Protocol	Laboratory
EPA 8260C	Volatile Organic Compounds (GC/MS)	SW846	TAL PIT
5030C	Purge and Trap	SW846	TAL PIT

Protocol References:

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

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Initial

Amount

5 mL

Initial

Amount

5 mL

Initial

Amount

5 ml

Initial

Amount

5 mL

Batch

Number

271738

Batch

Number

271738

Batch

Number

271738

Batch

Number

271738

Final

Amount

5 mL

Final

Amount

5 mL

Final

Amount

5 ml

Final

Amount

5 mL

Dil

100

Dil

Dil

Dil

1

Factor

Factor

Factor

Factor

Run

Run

Run

Run

Client Sample ID: UTM-1 Date Collected: 02/26/19 18:05

Date Received: 02/28/19 08:45

Client Sample ID: UTM-4 Date Collected: 02/26/19 16:45

Date Received: 02/28/19 08:45

Client Sample ID: UTM-6

Date Collected: 02/26/19 12:25

Date Received: 02/28/19 08:45

Client Sample ID: UTM-7

Date Collected: 02/26/19 12:23

Date Received: 02/28/19 08:45

Prep Type

Prep Type

Prep Type

Prep Type

Total/NA

Total/NA

Total/NA

Total/NA

Batch

Туре

Batch

Type

Batch

Туре

Analysis

Batch

Type

Analysis

Analysis

Analysis

Batch

Batch

Batch

Batch

Instrument ID: CHHP5

Method

EPA 8260C

Lab Sample ID: 180-87124-1

Analyst

HRB

Prepared

or Analyzed

03/01/19 16:27

Matrix: Water

Lab

TAL PIT

2 3 4 5 6 7 8 9

Lab Sample ID: 180-87124-2 Matrix: Water Prepared or Analyzed Analyst Lab 03/01/19 16:51 HRB TAL PIT Lab Sample ID: 180-87124-3 Matrix: Water Prepared or Analyzed Analyst Lab 03/01/19 17:15 HRB TAL PIT Lab Sample ID: 180-87124-4 Matrix: Water Prepared or Analyzed Analyst I ab HRB 03/01/19 17:39 TAL PIT Lab Sample ID: 180-87124-5 Matrix: Water

Client Sample ID: UTM-8 Date Collected: 02/26/19 16:28 Date Received: 02/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	271965	03/05/19 15:10	HRB	TAL PIT
	Instrumer	nt ID: CHHP5								

Client Sample ID: UTM-9 Date Collected: 02/26/19 14:42 Date Received: 02/28/19 08:45

Dil Batch Batch Initial Final Batch Prepared Method Prep Type Number or Analyzed Туре Run Factor Amount Amount Analyst Lab Total/NA Analysis EPA 8260C 271738 03/01/19 18:27 HRB TAL PIT 1 5 mL 5 ml Instrument ID: CHHP5

TestAmerica Pittsburgh

Lab Sample ID: 180-87124-6

Matrix: Water

Initial

Amount

5 mL

Initial

Amount

5 mL

Final

Amount

5 mL

Final

Amount

5 mL

Batch

Number

271738

Batch

Number

271965

Dil

1

Dil

5

Factor

Factor

Run

Run

Client Sample ID: UTM-10

Date Collected: 02/25/19 11:10

Date Received: 02/28/19 08:45

Client Sample ID: UTM-11

Date Collected: 02/26/19 17:40

Date Received: 02/28/19 08:45

Prep Type

Prep Type

Total/NA

Total/NA

Batch

Туре

Analysis

Batch

Type

Analysis

Batch

Batch

Instrument ID: CHHP5

Method

EPA 8260C

Instrument ID: CHHP5

Method

EPA 8260C

Lab Sample ID: 180-87124-7

Analyst

Lab Sample ID: 180-87124-8

Analyst

Lab Sample ID: 180-87124-9

Lab Sample ID: 180-87124-10

Lab Sample ID: 180-87124-11

Lab Sample ID: 180-87124-12

Prepared

or Analyzed

Prepared

or Analyzed

03/05/19 15:33 HRB

03/01/19 15:40 HRB

Matrix: Water

Lab

TAL PIT

Matrix: Water

Lab

TAL PIT

Matrix: Water

Matrix: Water

Matrix: Water

Matrix: Water

8

Client Sample ID: UTM-14 Date Collected: 02/26/19 10:20 Date Received: 02/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	271965	03/05/19 15:58	HRB	TAL PIT
	Instrumer	nt ID: CHHP5								

Client Sample ID: UTM-17 Date Collected: 02/26/19 09:29 Date Received: 02/28/19 08:45

Ргер Туре	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis Instrumen	EPA 8260C It ID: CHHP5		1	5 mL	5 mL	271738	03/01/19 19:40	HRB	TAL PIT

Client Sample ID: UTM-20 Date Collected: 02/25/19 15:45

Date Received: 02/28/19 08:45

	Batch	Batch		Dil	Initial	Final	Batch	Prepared		
Prep Type	Туре	Method	Run	Factor	Amount	Amount	Number	or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	271738	03/01/19 14:52	HRB	TAL PIT
	Instrumer	t ID: CHHP5								

Client Sample ID: UTM-21 Date Collected: 02/25/19 14:52 Date Received: 02/28/19 08:45

Prep Type Total/NA	Batch Type Analysis	Batch Method EPA 8260C	Run	Dil Factor	Initial Amount 5 mL	Final Amount 5 mL	Batch Number 271738	Prepared or Analyzed 03/01/19 15:16	Analyst HRB	Lab TAL PIT
	Instrumen	t ID: CHHP5								

Lab Sample ID: 180-87124-13

Lab Sample ID: 180-87124-14

Lab Sample ID: 180-87124-15

Matrix: Water

Matrix: Water

Matrix: Water

1 2 3 4 5 6 7 8 9

Client Sample ID: UTM-22

Date Collected: 02/25/19 13:15	
Date Received: 02/28/19 08:45	

Prep Type Total/NA	Batch Type Analysis Instrumer	Batch Method EPA 8260C at ID: CHHP5	Run	Dil Factor 1	Initial Amount 5 mL	Final Amount 5 mL	Batch Number 271738	Prepared or Analyzed 03/01/19 16:03	Analyst HRB	Lab TAL PIT
-----------------------	--	--	-----	--------------------	---------------------------	-------------------------	---------------------------	---	----------------	----------------

Client Sample ID: UTM-23 Date Collected: 02/26/19 18:30 Date Received: 02/28/19 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 8260C		1	5 mL	5 mL	271738	03/01/19 20:04	HRB	TAL PIT
	Instrumer	t ID: CHHP5								

Client Sample ID: TRIP BLANK 1 Date Collected: 02/26/19 08:00 Date Received: 02/28/19 08:45

Prep Type Total/NA	Batch Type Analysis	Batch Method EPA 8260C	Run	Dil Factor	Initial Amount 5 mL	Final Amount 5 mL	Batch Number 271965	Prepared or Analyzed 03/05/19 14:46	Analyst HRB	Lab
	Instrumer	t ID: CHHP5								

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Analysis HRB = Hannah Bowie

RL

100

100

Limits

58 - 124

64 - 125

65 - 127

69 - 115

MDL Unit

60 ug/L

69 ug/L

D

Prepared

Prepared

Client Sample ID: UTM-1

Date Collected: 02/26/19 18:05

Date Received: 02/28/19 08:45

Analyte

Surrogate

1,1,1-Trichloroethane

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

1,2-Dichloroethane-d4 (Surr)

Trichloroethene

Toluene-d8 (Surr)

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

Result Qualifier

82 J

%Recovery Qualifier

91

109

117

100

1500

Analyzed

03/01/19 16:27

03/01/19 16:27

Analyzed

03/01/19 16:27

03/01/19 16:27

03/01/19 16:27

03/01/19 16:27

Lab Sample ID: 180-87124-1 Matrix: Water Dil Fac 100 100 Dil Fac

8
9

100

100

100

100

Lab Sample ID: 180-87124-2 Matrix: Water

Lab Sample ID: 180-87124-3

Lab Sample ID: 180-87124-4

Matrix: Water

Matrix: Water

Date Collected: 02/26/19 16:45 Date Received: 02/28/19 08:45

Client Sample ID: UTM-4

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 16:51	1
Trichloroethene	1.3		1.0	0.69	ug/L			03/01/19 16:51	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		58 - 124					03/01/19 16:51	1
Dibromofluoromethane (Surr)	107		64 - 125					03/01/19 16:51	1
1,2-Dichloroethane-d4 (Surr)	117		65 - 127					03/01/19 16:51	1
Toluene-d8 (Surr)	100		69 - 115					03/01/19 16:51	1

Client Sample ID: UTM-6 Date Collected: 02/26/19 12:25 Date Received: 02/28/19 08:45

Method: EPA 8260C - Vola	tile Organic Co	ompounds	(GC/MS)						
Analyte	Result	Qualifier	ŔL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 17:15	1
Trichloroethene	ND		1.0	0.69	ug/L			03/01/19 17:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		58 - 124					03/01/19 17:15	1
Dibromofluoromethane (Surr)	115		64 - 125					03/01/19 17:15	1
1,2-Dichloroethane-d4 (Surr)	128	X	65 - 127					03/01/19 17:15	1

Client Sample ID: UTM-7 Date Collected: 02/26/19 12:23 Date Received: 02/28/19 08:45

Method: EPA 8260C - Volat	ile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 17:39	1
Trichloroethene	ND		1.0	0.69	ug/L			03/01/19 17:39	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		58 - 124			-		03/01/19 17:39	1
Dibromofluoromethane (Surr)	105		64 - 125					03/01/19 17:39	1

Client Sample ID: UTM-7 Date Collected: 02/26/19 12:23 Date Received: 02/28/19 08:45

Method: EPA 8260C - Volatile	Organic Co	mpounds	(GC/MS) (Conti	nued)		
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		65 - 127		03/01/19 17:39	1
Toluene-d8 (Surr)	104		69 - 115		03/01/19 17:39	1

Client Sample ID: UTM-8 Date Collected: 02/26/19 16:28

Dale	conecteu.	02/20/13	10.20
Date	Received:	02/28/19	08:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/05/19 15:10	1
Trichloroethene	ND		1.0	0.69	ug/L			03/05/19 15:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	85		58 - 124					03/05/19 15:10	1
Dibromofluoromethane (Surr)	104		64 - 125					03/05/19 15:10	1
1,2-Dichloroethane-d4 (Surr)	111		65 - 127					03/05/19 15:10	1
Toluene-d8 (Surr)	99		69 - 115					03/05/19 15:10	1

Client Sample ID: UTM-9 Date Collected: 02/26/19 14:42 Date Received: 02/28/19 08:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 18:27	1
Trichloroethene	ND		1.0	0.69	ug/L			03/01/19 18:27	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		58 - 124					03/01/19 18:27	1
Dibromofluoromethane (Surr)	89		64 - 125					03/01/19 18:27	1
1,2-Dichloroethane-d4 (Surr)	93		65 - 127					03/01/19 18:27	1
Toluene-d8 (Surr)	83		69 - 115					03/01/19 18:27	1

Client Sample ID: UTM-10

Date Collected: 02/25/19 11:10 Date Received: 02/28/19 08:45

Method: EPA 8260C - Volat	ile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	ŔL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.87	J	1.0	0.60	ug/L			03/01/19 15:40	1
Trichloroethene	2.6		1.0	0.69	ug/L			03/01/19 15:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	82		58 - 124					03/01/19 15:40	1
Dibromofluoromethane (Surr)	94		64 - 125					03/01/19 15:40	1
1,2-Dichloroethane-d4 (Surr)	102		65 - 127					03/01/19 15:40	1
Toluene-d8 (Surr)	99		69 - 115					03/01/19 15:40	1

Lab Sample ID: 180-87124-4

Lab Sample ID: 180-87124-5

Matrix: Water

Matrix: Water

9

Lab Sample ID: 180-87124-6 Matrix: Water

Lab Sample ID: 180-87124-7

Matrix: Water

Client Sample Results

Client Sample ID: UTM-11

Date Collected: 02/26/19 17:40

Date Received: 02/28/19 08:45

1,1,1-Trichloroethane

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

1,2-Dichloroethane-d4 (Surr)

Client Sample ID: UTM-14

Date Collected: 02/26/19 10:20

Date Received: 02/28/19 08:45

Trichloroethene

Toluene-d8 (Surr)

1,1,1-Trichloroethane Trichloroethene

4-Bromofluorobenzene (Surr)

Dibromofluoromethane (Surr)

1,2-Dichloroethane-d4 (Surr)

Toluene-d8 (Surr)

Analyte

Surrogate

Analyte

Surrogate

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

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

Result Qualifier

30 F1

62 F1

%Recovery Qualifier

87

103

113

101

Result Qualifier

ND

1.3

%Recovery Qualifier

87

103 115

98

Lab Sample ID: 180-87124-8

Analyzed

03/05/19 15:33

03/05/19 15:33

Analyzed

03/05/19 15:33

03/05/19 15:33

03/05/19 15:33

03/05/19 15:33

Analyzed

03/05/19 15:58

Matrix: Water

Matrix: Water

Lab Sample ID: 180-87124-10

Lab Sample ID: 180-87124-11

Matrix: Water

Dil Fac

Dil Fac

5

5

5

5 5

5

2 3 4 5 6 7 8 8

Lab Sample ID: 180-87124-9 Matrix: Water

- 1

Dil Fac

12

1.0	0.60	ug/L		03/05/19 15:58	1
1.0	0.69	ug/L		03/05/19 15:58	1
Limits			Prepared	Analyzed	Dil Fac
58 - 124				03/05/19 15:58	1
64 - 125				03/05/19 15:58	1
65 - 127				03/05/19 15:58	1

D

D

Prepared

Prepared

Prepared

Client Sample ID: UTM-17 Date Collected: 02/26/19 09:29 Date Received: 02/28/19 08:45

Method: EPA 8260C - Volatile Organic Compounds (GC/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane			1.0	0.60	ug/L			03/01/19 19:40	1
Trichloroethene	11		1.0	0.69	ug/L			03/01/19 19:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		58 - 124					03/01/19 19:40	1
Dibromofluoromethane (Surr)	108		64 - 125					03/01/19 19:40	1
1,2-Dichloroethane-d4 (Surr)	123		65 - 127					03/01/19 19:40	1
Toluene-d8 (Surr)	99		69 - 115					03/01/19 19:40	1

Client Sample ID: UTM-20 Date Collected: 02/25/19 15:45 Date Received: 02/28/19 08:45

Method: EPA 8260C - Volat	ile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 14:52	1
Trichloroethene	ND		1.0	0.69	ug/L			03/01/19 14:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	87		58 - 124					03/01/19 14:52	1
Dibromofluoromethane (Surr)	105		64 - 125					03/01/19 14:52	1

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RL

5.0

5.0

Limits

58 - 124

64 - 125

65 - 127

69 - 115

RL

69 - 115

MDL Unit

3.0 ug/L

3.4 ug/L

MDL Unit

Client Sample ID: UTM-20 Date Collected: 02/25/19 15:45 Date Received: 02/28/19 08:45

Method: EPA 8260C - Volat	ile Organic Co	mpounds	(GC/MS) (Continue	d)		
Surrogate	%Recovery	Qualifier	Limits		Prepared	Analyzed
1,2-Dichloroethane-d4 (Surr)	116		65 - 127	_		03/01/19 14:52
Toluene-d8 (Surr)	102		69 - 115			03/01/19 14:52

Client Sample ID: UTM-21 Date Collected: 02/25/19 14:52 Date Received: 02/28/19 08:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 15:16	1
Trichloroethene	ND		1.0	0.69	ug/L			03/01/19 15:16	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	78		58 - 124					03/01/19 15:16	1
Dibromofluoromethane (Surr)	94		64 - 125					03/01/19 15:16	1
1,2-Dichloroethane-d4 (Surr)	106		65 - 127					03/01/19 15:16	1
Toluene-d8 (Surr)	88		69 - 115					03/01/19 15:16	1

Client Sample ID: UTM-22 Date Collected: 02/25/19 13:15 Date Received: 02/28/19 08:45

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 16:03	1
Trichloroethene	2.2		1.0	0.69	ug/L			03/01/19 16:03	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	65		58 - 124					03/01/19 16:03	1
Dibromofluoromethane (Surr)	75		64 - 125					03/01/19 16:03	1
1,2-Dichloroethane-d4 (Surr)	86		65 - 127					03/01/19 16:03	1
Toluene-d8 (Surr)	72		69 - 115					03/01/19 16:03	1

Client Sample ID: UTM-23

Date Collected: 02/26/19 18:30 Date Received: 02/28/19 08:45

Method: EPA 8260C - Volat	ile Organic Co	mpounds	(GC/MS)						
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/01/19 20:04	1
Trichloroethene	ND		1.0	0.69	ug/L			03/01/19 20:04	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	86		58 - 124					03/01/19 20:04	1
Dibromofluoromethane (Surr)	110		64 - 125					03/01/19 20:04	1
1,2-Dichloroethane-d4 (Surr)	122		65 - 127					03/01/19 20:04	1
Toluene-d8 (Surr)	100		69 - 115					03/01/19 20:04	1

Matrix: Water

Matrix: Water

Dil Fac

1

Lab Sample ID: 180-87124-11

Lab Sample ID: 180-87124-12

Lab Sample ID: 180-87124-13 Matrix: Water

Lab Sample ID: 180-87124-14

Matrix: Water

3/7/2019

Client Sample ID: TRIP BLANK 1 Date Collected: 02/26/19 08:00 Date Received: 02/28/19 08:45

Lab Sample ID: 180-87124-15 Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.60	ug/L			03/05/19 14:46	1
Trichloroethene	ND		1.0	0.69	ug/L			03/05/19 14:46	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	74		58 - 124					03/05/19 14:46	1
Dibromofluoromethane (Surr)	88		64 - 125					03/05/19 14:46	1
1,2-Dichloroethane-d4 (Surr)	97		65 - 127					03/05/19 14:46	1
Toluene-d8 (Surr)	88		69 - 115					03/05/19 14:46	

Lab Sample ID: MB 180-271738/7

Client Sample ID: Method Blank

5 10

Method: EPA	8260C - V	olatile (Organic (Compounds	(GC/MS)

Matrix: Water Analysis Batch: 271738										Prep Type: To	otal/NA
Analysis Baten. 27 1700	МВ	МВ									
Analyte	Result	Qualifier	RL	I	MDL	Unit	D	P	repared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0		0.60	ug/L				03/01/19 13:21	1
Trichloroethene	ND		1.0		0.69	ug/L				03/01/19 13:21	1
	МВ	MB									
Surrogate	%Recovery	Qualifier	Limits					F	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		58 - 124							03/01/19 13:21	1
Dibromofluoromethane (Surr)	101		64 - 125							03/01/19 13:21	1
1,2-Dichloroethane-d4 (Surr)	117		65 - 127							03/01/19 13:21	1
Toluene-d8 (Surr)	107		69 - 115							03/01/19 13:21	1
Lab Sample ID: LCS 180-271	738/5						Clien	t Sa	mple ID:	: Lab Control S	Sample
Matrix: Water										Prep Type: To	
Analysis Batch: 271738											
-			Spike	LCS	LCS	5				%Rec.	
Analyte			Added	Result	Qua	lifier	Unit	D	%Rec	Limits	
1,1,1-Trichloroethane			10.0	9.05			ug/L		91	65 - 136	
Trichloroethene			10.0	9.81			ug/L		98	71 - 121	

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		58 - 124
Dibromofluoromethane (Surr)	94		64 - 125
1,2-Dichloroethane-d4 (Surr)	103		65 - 127
Toluene-d8 (Surr)	102		69 - 115

Lab Sample ID: 180-87124-7 MS Matrix: Water Analysis Batch: 271738

-	Sample	Sample	Spike	MS	MS				%Rec.	
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	
1,1,1-Trichloroethane	0.87	J	10.0	9.09		ug/L		82	65 - 136	
Trichloroethene	2.6		10.0	11.6		ug/L		90	71 ₋ 121	

	MS	MS	
Surrogate	%Recovery	Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		58 - 124
Dibromofluoromethane (Surr)	96		64 - 125
1,2-Dichloroethane-d4 (Surr)	110		65 - 127
Toluene-d8 (Surr)	93		69 - 115

Lab Sample ID: 180-87124-7 MSD **Matrix: Water** Analysis Batch: 271738

,	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1-Trichloroethane	0.87	J	10.0	8.71		ug/L		78	65 - 136	4	28
Trichloroethene	2.6		10.0	11.7		ug/L		91	71 - 121	1	28
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	94		58 - 124								

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Client Sample ID: UTM-10 Prep Type: Total/NA

Client Sample ID: UTM-10 Prep Type: Total/NA

Toluene-d8 (Surr)

3 4 5 6 7

ab Sample ID: 180-87124	4-7 MSD								Clier	nt Sample ID: L	
Matrix: Water										Prep Type: To	otal/NA
Analysis Batch: 271738											
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
Dibromofluoromethane (Surr)	94		64 - 125								
1,2-Dichloroethane-d4 (Surr)	106		65 - 127								
Toluene-d8 (Surr)	98		69 - 115								
Lab Sample ID: MB 180-2	71965/7							Cli	ent Sam	ple ID: Method	Blank
Matrix: Water								•		Prep Type: To	
Analysis Batch: 271965											•
-		MB MB									
Analyte	Re	sult Qualifi	er Ri		MDL (D F	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane		ND	1.0		0.60 ι	-				03/05/19 12:22	1
Trichloroethene		ND	1.0	C	0.69 ι	ug/L				03/05/19 12:22	1
		MB MB									
Surrogate	%Recov	very Qualifi	er Limits					F	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)		88	58 - 124	_					•	03/05/19 12:22	1
Dibromofluoromethane (Surr)		102	64 - 125							03/05/19 12:22	1
1,2-Dichloroethane-d4 (Surr)		110	65 - 127							03/05/19 12:22	1
Toluene-d8 (Surr)		100	69 - 115							03/05/19 12:22	1
/latrix: Water Analysis Batch: 271965			Spike	1.06	LCS					Prep Type: To %Rec.	
Analyte			Added	Result		fier I	Unit	D	%Rec	Limits	
1,1,1-Trichloroethane			10.0	9.47	quai		ug/L		95	65 - 136	
Trichloroethene			10.0	9.99			ug/L		100	71 - 121	
							5			·	
	LCS		l insite								
Surrogate	%Recovery	Qualifier	Limits								
1-Bromofluorobenzene (Surr) Dibromofluoromethane (Surr)	97 89		58 - 124 64 - 125								
1,2-Dichloroethane-d4 (Surr)	89 97		64 - 125 65 - 127								
Toluene-d8 (Surr)	97 100		69 - 115								
	100		00-770								
Lab Sample ID: 180-87124	4-8 MS								Clier	nt Sample ID: L	JTM-11
Matrix: Water										Prep Type: To	
Analysis Batch: 271965											
	Sample		Spike		MS					%Rec.	
Analyte		Qualifier	Added	Result			Unit	D		Limits	
1,1,1-Trichloroethane	30		50.0	61.8			ug/L		64	65 - 136	
Trichloroethene	62	F1	50.0	94.9	F1	ι	ug/L		66	71 - 121	
	MS	MS									
Surrogate	%Recovery		Limits								
4-Bromofluorobenzene (Surr)	62		58 - 124								
Dibromofluoromethane (Surr)	64		64 - 125								
Dibromofluoromethane (Surr) 1,2-Dichloroethane-d4 (Surr)	64 72		64 - 125 65 - 127								

69 - 115

64 X

3/7/2019

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

Lab Sample ID: 180-87124 Matrix: Water	4-8 MSD							Clier	nt Sample Prep Typ		
Analysis Batch: 271965											
	Sample	Sample	Spike	MSD	MSD				%Rec.		RPD
Analyte	Result	Qualifier	Added	Result	Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,1,1-Trichloroethane	30	F1	50.0	70.2		ug/L		81	65 - 136	13	28
Trichloroethene	62	F1	50.0	103		ug/L		82	71 - 121	8	28
	MSD	MSD									
Surrogate	%Recovery	Qualifier	Limits								
4-Bromofluorobenzene (Surr)	82		58 - 124								
Dibromofluoromethane (Surr)	85		64 - 125								
1,2-Dichloroethane-d4 (Surr)	95		65 - 127								
Toluene-d8 (Surr)	83		69 - 115								

10

EPA 8260C

EPA 8260C

EPA 8260C

EPA 8260C

GC/MS VOA

MB 180-271965/7

LCS 180-271965/5

180-87124-8 MS 180-87124-8 MSD Method Blank

UTM-11

UTM-11

Lab Control Sample

Analysis Batch: 271738

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87124-1	UTM-1	Total/NA	Water	EPA 8260C	
180-87124-2	UTM-4	Total/NA	Water	EPA 8260C	
180-87124-3	UTM-6	Total/NA	Water	EPA 8260C	
180-87124-4	UTM-7	Total/NA	Water	EPA 8260C	
180-87124-6	UTM-9	Total/NA	Water	EPA 8260C	
180-87124-7	UTM-10	Total/NA	Water	EPA 8260C	
180-87124-10	UTM-17	Total/NA	Water	EPA 8260C	
180-87124-11	UTM-20	Total/NA	Water	EPA 8260C	
180-87124-12	UTM-21	Total/NA	Water	EPA 8260C	
180-87124-13	UTM-22	Total/NA	Water	EPA 8260C	
180-87124-14	UTM-23	Total/NA	Water	EPA 8260C	
MB 180-271738/7	Method Blank	Total/NA	Water	EPA 8260C	
LCS 180-271738/5	Lab Control Sample	Total/NA	Water	EPA 8260C	
180-87124-7 MS	UTM-10	Total/NA	Water	EPA 8260C	
180-87124-7 MSD	UTM-10	Total/NA	Water	EPA 8260C	
nalysis Batch: 27	1965				
Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-87124-5	UTM-8	Total/NA	Water	EPA 8260C	
180-87124-8	UTM-11	Total/NA	Water	EPA 8260C	
180-87124-9	UTM-14	Total/NA	Water	EPA 8260C	
180-87124-15	TRIP BLANK 1	Total/NA	Water	EPA 8260C	

Total/NA

Total/NA

Total/NA

Total/NA

Water

Water

Water

Water

Полости (1)	Phone (412) 963-7058 Fax (412) 963-2468						THE LEADER IN EMMINOSAMENTAL TESTING
Pmore [L] [L] </th <th>ient Information</th> <th>Sampler TRM& 6</th> <th></th> <th>Lab PM: Dunlap,</th> <th>David A</th> <th>Carrier Tracking No(s):</th> <th>COC No: 180-42518-7591.1</th>	ient Information	Sampler TRM& 6		Lab PM: Dunlap,	David A	Carrier Tracking No(s):	COC No: 180-42518-7591.1
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Custody Seal No.:	DD T T T T T T T T T T T T T T T T T T	20	119 845
		Cooler Temperature(s) °C and Other Remarks.	-

Client: Marks Environmental, Inc.

Login Number: 87124 List Number: 1 Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is = background as measured by a survey meter.</td <td>True</td> <td></td>	True	
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.	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.	N/A	

Job Number: 180-87124-1

List Source: TestAmerica Pittsburgh

Appendix B

Statistical Analysis

or Data Th	nrough 2/1	9 (also 11,	/1/13)		
UTM-4	UTM-7	UTM-9	UTM-21	UTM-23	MCL
TCE	TCE	TCE	TCE	TCE	TCE
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3.2	1.3	4.5	-	-	
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	-	1	-	-	
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	••		•	-	
0.98	1.58	1.10	1.07	0.91	5.00
	UTM-4 8.9 3.2 36 2.5 1.5 1.7 0.8 2.1 1.5 1.8 0.5 0.33 1.7 1.5 0.29 0.69 0.51 1.1 0.73 0.62 0.64 0.92 1.2 1.1 0.73 0.62 0.64 0.92 1.2 1.1 0.73 0.62 0.64 0.92 1.2 1.1 0.73 0.62 0.64 0.92 1.2 1.2 1.5 0.91 0.82 1.7 0.75 0.91 0.82 1.7 0.75 0.91 0.82 1.7 0.78 0.6 0.91 1.6 0.72 1.1 0.75 0.91 0.82 1.7 0.78 0.6 0.91 1.6 0.72 1.1 0.75 0.91 0.82 1.7 0.78 0.6 0.91 1.6 0.72 1.1 0.75 0.91 0.82 1.7 0.78 0.6 0.91 1.6 0.72 1.1 0.72 1.1 0.72 0.75 0.91 0.82 1.7 0.78 0.6 0.91 1.6 0.72 1.1 0.72 0.13 C65:C75 8 3.55 2.32 2.46 -0.13 CL) UTM-4	UTM-4 UTM-7 TCE TCE 8.9 1 3.2 1.3 36 - 2.5 - 1.7 - 0.8 - 2.5 - 1.7 - 0.8 - 2.1 - 1.5 - 1.5 - 1.5 - 1.5 - 1.5 - 1.5 - 0.5 - 0.33 - 1.7 - 1.7 - 0.69 - 0.61 - 0.62 - 0.62 - 0.62 - 0.63 - 1.1 - 0.62 - 0.63 - 0.75 - 0.82 - 1.7 - <	UTM-4 UTM-7 UTM-9 TCE TCE TCE 8.9 1 1 3.2 1.3 4.5 36 - 20 2.5 - 0.9 1.5 - 1 1.7 - 1 0.8 - 1 2.1 - 1 0.5 - 1 1.5 - 1 0.5 - 1 0.5 - 1 0.5 - 1 0.5 - 1 0.5 - 1 0.5 - 1 0.6 - - 0.69 - - 0.73 - - 0.61 - - 0.73 - - 0.74 - - 0.75 - - 1.2 - -	TCETCETCETCETCE8.911-3.21.34.5-36-20-36-20-36-0.9-1.5-1-1.7-1-0.8-1-1.5-1-1.5-1-1.5-1-1.5-1-1.5-1-0.33-1-1.5-1-1.5-1-0.51-1-0.6910.61-10.62-10.62-10.62-10.62-10.62-10.62-10.63-10.64-10.65-10.61-10.62-10.75-11.7-11.8-10.91-11.7-11.61.10-11.111.121.13111.141.151.16 </td <td>UTM-4 UTM-7 UTM-9 UTM-21 UTM-23 TCE TCE TCE TCE TCE TCE 8.9 1 1 - - - 3.2 1.3 4.5 - - - 3.6 - 20 - - - 1.5 - 0.9 - - - 1.5 - 1 - - - 0.8 - 1 - - - 1.5 - 1 - - - 0.8 - 1 - - - 1.5 - 1 - - - 0.33 1 - - - - 1.7 - 0.16 - - - 1.7 - 1 0.43 - - 0.69 - - 1 0.43 -</td>	UTM-4 UTM-7 UTM-9 UTM-21 UTM-23 TCE TCE TCE TCE TCE TCE 8.9 1 1 - - - 3.2 1.3 4.5 - - - 3.6 - 20 - - - 1.5 - 0.9 - - - 1.5 - 1 - - - 0.8 - 1 - - - 1.5 - 1 - - - 0.8 - 1 - - - 1.5 - 1 - - - 0.33 1 - - - - 1.7 - 0.16 - - - 1.7 - 1 0.43 - - 0.69 - - 1 0.43 -

TCE 95% Upper Confidence Limit for Last 8 POC Well Results vs. MCL For Data Through 2/19 (also 11/1/13)

(1) "-" indicates reported as Not Analyzed; RL used when not detected.

(2) "#NUM!" indicates UCL cannot be calculated because all values <1 (i.e., Not

Detected)

Data highlighted in Light Green used for check against UCL test