ESAT Controlled Number: ESAT5.1.3.501-py 30 Dec 2014

DATE: December 30, 2014

Tetra Tech
Attn: **Mr. Kris Schnoes**
1 South Wacker Drive – 37th Floor
Chicago, IL 60601-4651

Site Name: West Vermont Street Water (IN) – **level 3 data validation**

Case	SDG	Lab	Samples	Matrix
44782	E5AT4	Shealy	1	water

Analysis: **TVOA**

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.

Signature:_____ Date:_____

FROM: **U.S. EPA - Region 5**
Sylvia Griffin
Chicago Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

Sent By: Pat A. Joyner
Data Coordinator
ESAT Region 5 - **Techlaw Inc.**

Controlled Documents

ESAT5.1.5.400

ACH
12-29-2014

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
SUPERFUND DIVISION

DATE:

SUBJECT: Review of Data
Received for Review on: November 17, 2014

FROM: Timothy Prendiville, Supervisor (SR-6J)
Superfund Contract Management Section

TO: Data User: TetraTech
Email address: kevin.scott@tetratech.com

Level 3 Data Validation for the EXES program

We have reviewed the data for the following case:

Site Name: West Vermont Street Water (IN)

Case Number: 44782 SDG Number: E5AT4

Number and Type of Samples: 1 water (Trace VOA)

Sample Numbers: E5AT4

Laboratory: Shealy Environmental Services, Inc. Hrs for Review:

Following are our findings:

CC: Howard Pham
Region 5 TPO
Mail Code: SA-5J

Case Number: 44782
Site Name: West Vermont Street Water (IN)

SDG Number: E5AT4
Laboratory: Shealy

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

One (1) preserved water sample labeled E5AT4 was collected on 10/23/14. The sample was were received by Shealy Environmental Services, Inc. (SHEALY) located in West Columbia, SC on 10/25/14. The sample arrived intact and at the proper shipping temperature range of 2 - 6°C. The sample was analyzed for only the trace volatile target compounds. The sample was analyzed according to CLP SOW SOM01.2 (10/2006) and reviewed according to the NFG for SOM01.2 and the SOP for ESAT 5/TechLaw Validation of Contract Laboratory Program Organic Data (Version 2.6.2).

Sample E5AT4 was designated by the samplers to be used for laboratory QC, i.e. MS / MSD analyses.

Sample E5AT4 was not identified as a field blank or a field duplicate.

Case Number: 44782
Site Name: West Vermont Street Water (IN)

SDG Number: E5AT4
Laboratory: Shealy

1. HOLDING TIME

No problems found.

2. GC/MS TUNING AND GC INSTRUMENT PERFORMANCE

No problems found.

3. CALIBRATION

No problems found.

4. BLANKS

The following trace volatile sample has analyte concentrations reported less than 2X the CRQL. The associated method blank concentration is less than the concentration criteria. Detected compounds are qualified U. Non-detected compounds are not qualified. Reported sample concentration has been elevated to 2X the CRQL.

Methylene chloride
VHBLK01

5. DEUTERATED MONITORING COMPOUND AND SURROGATE RECOVERY

No problems found.

6A. MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Sample E5AT4 was designated by the samplers to be used for laboratory QC, i.e. MS / MSD analyses.

No problems found.

6B. LABORATORY CONTROL SAMPLE

Not applicable to this analysis.

7. FIELD BLANK AND FIELD DUPLICATE

Sample E5AT4 was not identified as a field blank or a field duplicate.

8. INTERNAL STANDARDS

No problems found.

Case Number: 44782
Site Name: West Vermont Street Water (IN)

SDG Number: E5AT4
Laboratory: Shealy

9. COMPOUND IDENTIFICATION

Manual integrations were performed on the following volatile sample because the laboratory software failed to integrate the appropriate peaks.

VSTD005BD
2-Butanone-d_5

10. COMPOUND QUANTITATION AND REPORTED DETECTION LIMITS

The following volatile samples have compound concentrations less than the CRQL. Detected compounds are qualified J.

E5AT4
Methyl tert-Butyl Ether, Toluene

E5AT4MS
Methyl tert-Butyl Ether

VBLKBD
Methylene chloride

A library search indicates a match at or above 85% for a TIC compound in the following trace volatile samples. Detected compounds are qualified NJ.

CAS No. 363-72-4 Benzene, pentafluoro-
VBLKBD

A library search indicates a match below 85% for a TIC compound in the following trace volatile samples. Detected compounds are qualified J.

Unknown @ 1.43
VBLKBD

11. SYSTEM PERFORMANCE

GC/MS baseline indicated acceptable performance.

12. ADDITIONAL INFORMATION

The Case number is not listed on the COCs received by the laboratory. The sample tags list the case number as 44782. In accordance with previous direction from Region 5, the laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples under the scheduled case number 44782.

Reviewed by: Steffanie Tobin/Techlaw-ESAT
Date: December 29, 2014

Case Number: 44782
Site Name: West Vermont Street Water (IN)

SDG Number: E5AT4
Laboratory: Shealy

TICs with no CAS Numbers were not reported in the EXES Sample Summary Report for the volatile fractions. Please refer to Word document "44782 sdg E5AT4 TIC" for the validated TIC results.

The following trace volatile sample has compound concentration which exceed the instruments calibration range. The detected result is qualified J. Due to oversight, the sample was not re-analyzed to bring the result within the calibration range.

E5AT4
Vinyl chloride

The following trace volatile samples have compound concentrations which exceed the instruments calibration range. The detected results are qualified J. No dilutions were required because these are laboratory QC samples.

E5AT4MS, E5AT4MSD
Vinyl chloride

Reviewed by: Steffanie Tobin/Techlaw-ESAT
Date: December 29, 2014

Case Number: 44782
Site Name: West Vermont Street Water (IN)

SDG Number: E5AT4
Laboratory: Shealy

CADRE Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The analyte was positively identified; the associated numerical value is an approximate concentration of the analyte in the sample.
UJ	The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the action limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
N	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification.
NJ	The analysis indicates the presence of an analyte for which there is presumptive evidence to make a tentative identification and the associated numerical value represents its approximate concentration.
R	The data are unusable. (The compound may or may not be present.)

Reviewed by: Steffanie Tobin/Techlaw-ESAT
Date: December 29, 2014

Sample Summary Report

Case No:	44782	Contract:	EPW11035	SDG No:	E5AT4	Lab Code:	SHEALY
Sample Number:	E5AT4	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	WV-MW-6A-GW	pH:	2	Sample Date:	10/23/2014	Sample Time:	11:00:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoro methane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Vinyl chloride	Target	47	J	ug/L	47	E	1.0	Yes	S3VE
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichlorofluorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl tert-Butyl Ether	Target	0.19	J	ug/L	0.19	J	1.0	Yes	S3VE
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Bromochloromet hane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylcyclohexa ne	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromodichloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Toluene	Target	0.062	J	ug/L	0.062	J	1.0	Yes	S3VE
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
m,p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Case No: 44782	Contract: EPW11035	SDG No: E5AT4	Lab Code: SHEALY
Sample Number: E5AT4MS	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: WV-MW-6A-GW	pH: 2	Sample Date: 10/23/2014	Sample Time: 11:00:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoro methane	Target	5.0	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethene	Spike	3.7		ug/L	3.7		1.0	Yes	S3VE
Benzene	Spike	4.3		ug/L	4.3		1.0	Yes	S3VE
Chloromethane	Target	5.0	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichloroethene	Spike	4.7		ug/L	4.7		1.0	Yes	S3VE
Vinyl chloride	Target	42	J	ug/L	42	E	1.0	Yes	S3VE
Toluene	Spike	4.9		ug/L	4.9		1.0	Yes	S3VE
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chlorobenzene	Spike	5.4		ug/L	5.4		1.0	Yes	S3VE
Trichlorofluorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl tert-Butyl Ether	Target	0.18	J	ug/L	0.18	J	1.0	Yes	S3VE
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Bromochloromet hane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylcyclohexa ne	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromodichloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
m,p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Case No: 44782	Contract: EPW11035	SDG No: E5AT4	Lab Code: SHEALY
Sample Number: E5AT4MSD	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: WV-MW-6A-GW	pH: 2	Sample Date: 10/23/2014	Sample Time: 11:00:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,1-Dichloroethene	Spike	3.8		ug/L	3.8		1.0	Yes	S3VE
Dichlorodifluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Benzene	Spike	4.1		ug/L	4.1		1.0	Yes	S3VE
Vinyl chloride	Target	44	J	ug/L	44	E	1.0	Yes	S3VE
Trichloroethene	Spike	4.3		ug/L	4.3		1.0	Yes	S3VE
Toluene	Spike	4.8		ug/L	4.8		1.0	Yes	S3VE
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chlorobenzene	Spike	5.3		ug/L	5.3		1.0	Yes	S3VE
Trichlorofluoromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl tert-Butyl Ether	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Bromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylcyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromodichloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
m,p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Case No: 44782	Contract: EPW11035	SDG No: E5AT4	Lab Code: SHEALY
Sample Number: VBLKBD	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoro methane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Vinyl chloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichlorofluorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylene chloride	Target	0.068	J	ug/L	0.068	J	1.0	Yes	S3VE
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl tert-Butyl Ether	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Bromochloromet hane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylcyclohexa ne	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromodichlorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Toluene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
m,p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trimethylbenzene	Target		U		5.0	U	1.0	Yes	S3VE
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Benzene, pentafluoro-	TIC				4.6	NJ	1.0	Yes	NV
tert-Butyl Alcohol	Target		U		10	U	1.0	Yes	S3VE
Ethyl tert-butyl ether	Target		U		5.0	U	1.0	Yes	S3VE
1,3,5-Trimethylbenzene	Target		U		5.0	U	1.0	Yes	S3VE
tert-Amyl methyl ether	Target		U		5.0	U	1.0	Yes	S3VE

Case No: 44782	Contract: EPW11035	SDG No: E5AT4	Lab Code: SHEALY
Sample Number: VBLKZS	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoro methane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Vinyl chloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichlorofluorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylene chloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl tert-Butyl Ether	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Bromochloromet hane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylcyclohexa ne	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromodichlorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Toluene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
m,p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trimethylbenzene	Target		U		5.0	U	1.0	Yes	S3VE
1,3,5-Trimethylbenzene	Target		U		5.0	U	1.0	Yes	S3VE
tert-Butyl Alcohol	Target		U		10	U	1.0	Yes	S3VE
tert-Amyl methyl ether	Target		U		5.0	U	1.0	Yes	S3VE
Ethyl tert-butyl ether	Target		U		5.0	U	1.0	Yes	S3VE

Case No:	44782	Contract:	EPW11035	SDG No:	E5AT4	Lab Code:	SHEALY
Sample Number:	VHBLK01	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoro methane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Vinyl chloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromomethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichlorofluorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Acetone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Carbon disulfide	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl acetate	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylene chloride	Target	1.0	U	ug/L	0.15	JB	1.0	Yes	S3VE
trans-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methyl tert-Butyl Ether	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
cis-1,2-Dichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Butanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Bromochloromet hane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chloroform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,1-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Cyclohexane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Carbon tetrachloride	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Benzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Trichloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Methylcyclohexa ne	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromodichlorom ethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
cis-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
4-Methyl-2-pentanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Toluene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
trans-1,3-Dichloropropene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2-Trichloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Tetrachloroethene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
2-Hexanone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VE
Dibromochloromethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromoethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Chlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Ethylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
o-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
m,p-Xylene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Styrene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Bromoform	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
Isopropylbenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,1,2,2-Tetrachloroethane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,3-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,4-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2-Dibromo-3-chloropropane	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,4-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE
1,2,3-Trichlorobenzene	Target	0.50	U	ug/L	0.50	U	1.0	Yes	S3VE

National Functional Guidelines Report #09

Lab SHEALY(Shealy Environmental Services, Inc.) **SDG** E5AT4 **Case** 44782 **Contract** EPW11035 **Region** 5 **DDTID** 205518 **SOW** SOM01.2

Tentatively Identified Compounds

VOA_Trace Sample=VBLKBD Location= Matrix=Water Level=Trace

CAS No.	Compound Name	RT (mins)	Concentration		Lab Qualifier
	Unknown-01	1.43	14	ug/L	J
363-72-4	Benzene, pentafluoro-	5.89	4.6	ug/L	NJ

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE:

SUBJECT: Review of Data
Received for Review on 17 NOV 2014

FROM: Timothy Prendiville, Supervisor (**SR-6J**)
Superfund Contract Management Section

TO: Data User: Tetra Tech

We have reviewed the data for the following case:

SITE NAME: West Vermont Street Water (IN)

CASE NUMBER: 44782 SDG NUMBER: E5ATH

Number and Type of Samples: 1 water sample

Sample Numbers: E5ATH

Laboratory: Spectra Hrs for Review:

Following are our findings:

CC: Howard Pham
Region 5 TPO
Mail Code: **SA-5J**

Contract Laboratory Program

Sample Delivery Group (SDG) Cover Sheet

SDG Number	E5AT4	Case Number	44782	Contract Number	EPW11035
Lab Code	Shealy	SDG Turnaround	21 DAYS	Delivery CLIN(s)	0045

First Sample Received in SDG	E5AT4	Last Sample Received in SDG	E5AT4
First Sample Receipt Date	10/25/2014	Last Sample Receipt Date	10/25/2014

USEPA Sample Numbers in SDG (Listed in Numerical Order)

CLP Sample ID	Sample Type	Requested Analytical CLIN(s)/SubCLIN(s)	Solicitation Number	MA Number(s)
1 E5AT4	Water	TVOA	N/A	NA
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13		RS 11/7/14		
14				
15				
16				
17				
18				
19				
20				

Note: *There are a maximum of 20* ***field*** *samples (excluding PE samples) in an SDG. Attach TR/COC Records to this form in alphanumeric order (the order listed above on this form).*

Signature _____ Date 11/7/14

ESASY
ESASY

USEPA
DateShipped: 10/24/2014
CarrierName: FedEx
AirbillNo: 899270028171

CHAIN OF CUSTODY RECORD

West Vermont
Contact Name:
Contact Phone:

No: 5-102414-152245-0004
Cooler #:
Lab: Shealy Environmental Services
Lab Phone: 803-791-9700

Lab #	Location	CLP Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	WV-MW-3B-GW	E5AS8	CLP Volatiles	Ground Water	10/21/2014	12:00	9	40 ml VOA	HCl	
	WV-MW-3A-GW	E5AS9	CLP Volatiles	Ground Water	10/21/2014	13:33	3	40 ml VOA	HCl	N
	WV-MW-7A-GW	E5AT0	CLP Volatiles	Ground Water	10/21/2014	15:00	3	40 ml VOA	HCl	N
	WV-MW-5A-GW	E5AT1	CLP Volatiles	Ground Water	10/22/2014	11:23	3	40 ml VOA	HCl	N
	WV-MW-5B-GW	E5AT2	CLP Volatiles	Ground Water	10/22/2014	13:46	3	40 ml VOA	HCl	N
	WV-MW-5C-GW	E5AT3	CLP Volatiles	Ground Water	10/22/2014	15:51	3	40 ml VOA	HCl	N
	WV-MW-6A-GW	E5AT4	CLP Volatiles	Ground Water	10/23/2014	11:00	9	40 ml VOA	HCl	Y
	WV-MW-6A-GW	E5AT5	CLP Volatiles	Ground Water	10/23/2014	11:00	3	40 ml VOA	HCl	Y
	WV-MW-6B-GW	E5AT6	CLP Volatiles	Ground Water	10/23/2014	13:27	3	40 ml VOA	HCl	N
	WV-MW-9A-GW	E5AT7	CLP Volatiles	Ground Water	10/23/2014	15:08	3	40 ml VOA	HCl	N

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	TT START	10/24/14 1544			
				10/25/14 ~~0830~~ 0825 mcm 10/25/14	OK

T=2.8

SDG E5AT4 Final sample

9 of 180

Shealy Environmental Services, Inc.

SDG Narrative
11/14/2014
Case 44782
SDG E5AT4
SOW: SOM01.2
Contract Number: EPW11035

EPA Sample Numbers

EPA Sample Number	TVOA Fraction	DL/RE	pH
E5AT4	Yes	No	<2
E5AT4MS	Yes	No	<2
E5AT4MSD	Yes	No	<2

Columns	TVOA/TVOA SIM/VOA DB-624, 30m x 0.25mm x 1.4um
VOA Trap	OI #10

TVOA/ TVOA SIM/VOA Equation	Water sample concentration (ug/L) = $\frac{(A_x)(I_s)(DF)}{(A_{is})(\overline{RRF})(V_o)}$ Soil sample concentration (ug/Kg) = $\frac{(A_x)(I_s)(DF)}{(A_{is})(\overline{RRF})(W_s)(D)}$ Where A_x is the area of the characteristic ion (EICP) for the compound to be measured. A_{is} is the area of the characteristic ion (EICP) for the internal standard. I_s is the amount of internal standard added, in ng. $\overline{RRF}$ is the mean relative response factor from the initial calibration. DF is the dilution factor. V_o is total volume of water purged, in mL. Ws is the weight of sample added to the purge tube in g. $D = \frac{100 - \%moisture}{100}$

Sample Receiving

The one (1) water sample in this SDG was received in a sealed shipping container on October 25, 2014. The cooler temperature associated with the sample was 2.8°C.

The temperature was determined using a calibrated Fluke 66 IR thermometer.

The following issues are noted:

Issue: The Case number is not listed on the COCs received by the laboratory. The sample tags list the Case number as 44782.

Resolution 1: In accordance with previous direction from Region 5, The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples under the scheduled Case number. The resolution may then be applied to the remainder of the samples shipped under the same Case received with a COC that lists an incorrect Case number/the Case number field is left blank.

Issue: The laboratory has received 19 samples for this Case thus far, with samples E5AS4, E5AS8, and E5AT4 having 9 vials each. Please note that one vial for sample E5AS8 was broken in transit however the laboratory still has sufficient volume for analysis. The laboratory assumed that these samples required laboratory QC, therefore they were placed into three different SDGs. Please advise if performing laboratory QC on E5AS4, E5AS8, and E5AT4 is acceptable.

Resolution: Per Region 5, the laboratory should use samples E5AS4, E5AS8, and E5AT4 as laboratory QC and these samples should be noted in the SDG Narrative as such. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Cooler return information was not provided with the first shipment of this case. It was later provided to the lab.

TVOA Fraction

The concentration of vinyl chloride in sample E5AT4 was above calibration range. However, due to oversight, the sample was not analyzed at a dilution.

The peak eluting at ~6.1min on MSD8 in all analyses is Pentafluorobenzene. This is an internal standard compound that is not being used for quantitation. This compound is not being identified as a TIC.

The peak eluting at ~8.6min on MSD8 in all analyses is an extra DMC in the standard that is not being used for quantitation. This compound is not being identified as a TIC.

See the attached Manual Integration Report for a listing of all manual integrations associated with the samples and standards in this SDG. Unless otherwise noted manual integrations were performed due to incorrect auto integration.

As per the SOW, an example calculation is attached for Vinyl Chloride-d_3 in sample E5AT4.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Robert Zhu
Technical Director
November 14, 2014

Robert Zhu

From: Dean, Whitlee <wdean9@fedcsc.com>
Sent: Monday, October 27, 2014 3:39 PM
To: Robert Zhu
Cc: Schnoes, Kris Kruk; Scott, Kevin; Prendiville, Timothy; Layne, Warren; Roberman, Alida; Pham, Howard
Subject: Region 05 | Case 44782 | Lab SHEALY | Issue Multiple | FINAL
Attachments: img-X25174508-0001.pdf

Robert,

Discrepancies with tags, jars, and/or COC
Issue 1: The Case number is not listed on the COCs received by the laboratory. The sample tags list the Case number as 44782.
Resolution 1: In accordance with previous direction from Region 5, The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples under the scheduled Case number. The resolution may then be applied to the remainder of the samples shipped under the same Case received with a COC that lists an incorrect Case number/the Case number field is left blank.

Insufficient/inappropriate designation of laboratory QC
Issue 2: Samples E5AS7 and E5AT5 are designated for laboratory QC on the COC. However, only 3 vials for each sample was provided. The laboratory does not have sufficient volume to perform laboratory QC on these samples.
Resolution 2: Per Region 5, the laboratory should not use samples E5AS7 and E5AT5 for laboratory QC. These samples should just be considered field samples. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Issue 3: The laboratory has received 19 samples for this Case thus far, with samples E5AS4, E5AS8, and E5AT4 having 9 vials each. Please note that one vial for sample E5AS8 was broken in transit however the laboratory still has sufficient volume for analysis. The laboratory assumed that these samples required laboratory QC, therefore they were placed into three different SDGs. Please advise if performing laboratory QC on E5AS4, E5AS8, and E5AT4 is acceptable.
Resolution 3: Per Region 5, the laboratory should use samples E5AS4, E5AS8, and E5AT4 as laboratory QC and these samples should be noted in the SDG Narrative as such. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your PO.

Thanks,

WHITLEE DEAN
Environmental Coordinator- Regions 3 and 5
CSC

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From: Pham, Howard [mailto:pham.howard@epa.gov]
Sent: Monday, October 27, 2014 3:30 PM
To: Dean, Whitlee
Cc: Schnoes, Kris Kruk; Scott, Kevin; Prendiville, Timothy; Layne, Warren; Roberman, Alida
Subject: Re: Region 05 | Case 44782 | Lab SHEALY | Issue Multiple

Hi Whitlee,

We are concur with the proposed resolution for the issues 2 and 3 for the case 44782. Have nice day.

Howard Pham, CLP/ESAT/IAs R5 PO

From: Scott, Kevin <Kevin.Scott@tetratech.com>
Sent: Monday, October 27, 2014 2:01 PM
To: Pham, Howard; Schnoes, Kris Kruk
Subject: RE: Region 05 | Case 44782 | Lab SHEALY | Issue Multiple

Hi Howard,
The resolutions for issues 2 and 3 related to this case are appropriate. Please let me know if you need additional information.

Kevin Scott | R5 START Program Manager
1 S. Wacker Drive |Chicago, Illinois 60606 | www.tetratech.com
Direct: 312.201.7739 | Cell: 856.217.6072 | Fax: 312.201.0031

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From: Pham, Howard [mailto:pham.howard@epa.gov]
Sent: Monday, October 27, 2014 1:00 PM
To: Schnoes, Kris Kruk

Cc: Scott, Kevin
Subject: Fw: Region 05 | Case 44782 | Lab SHEALY | Issue Multiple

Hi Kris,

Please provide your recommend on the below issues 2 and 3 to me COB today. Thanks,

Howard Pham

From: Pham, Howard
Sent: Monday, October 27, 2014 12:09 PM
To: Dean, Whitlee; Roberman, Alida; Thomas, Carlene; Prendiville, Timothy; Layne, Warren
Cc: kevin.scott@tetratech.com
Subject: Re: Region 05 | Case 44782 | Lab SHEALY | Issue Multiple

Hi Whitlee,

I am waiting for the Kevin Scott, Tetratech recommends on the issues #2 and 3 by COB today.

Howard Pham

From: Dean, Whitlee <wdean9@fedcsc.com>
Sent: Monday, October 27, 2014 12:02 PM
To: Roberman, Alida; Thomas, Carlene; Pham, Howard; Prendiville, Timothy; Layne, Warren
Subject: RE: Region 05 | Case 44782 | Lab SHEALY | Issue Multiple

Good afternoon,

Please advise if the proposed resolutions for Issues 2 and 3 are acceptable to the Region.

Discrepancies with tags, jars, and/or COC
Issue 1: The Case number is not listed on the COCs received by the laboratory. The sample tags list the Case number as 44782.
Resolution 1: In accordance with previous direction from Region 5, The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples under the scheduled Case number. The resolution may then be applied to the remainder of the samples shipped under the same Case received with a COC that lists an incorrect Case number/the Case number field is left blank.

Insufficient/inappropriate designation of laboratory QC

Issue 2: Samples E5AS7 and E5AT5 are designated for laboratory QC on the COC. However, only 3 vials for each sample was provided. The laboratory does not have sufficient volume to perform laboratory QC on these samples.
PROPOSED Resolution 2: Per Region 5, the laboratory should not use samples E5AS7 and E5AT5 for laboratory QC. These samples should just be considered field samples. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Issue 3: The laboratory has received 19 samples for this Case thus far, with samples E5AS4, E5AS8, and E5AT4 having 9 vials each. Please note that one vial for sample E5AS8 was broken in transit however the laboratory still has sufficient volume for analysis. The laboratory assumed that these samples required laboratory QC, therefore they were placed into three different SDGs. Please advise if performing laboratory QC on E5AS4, E5AS8, and E5AT4 is acceptable.
PROPOSED Resolution 3: Per Region 5, the laboratory should use samples E5AS4, E5AS8, and E5AT4 as laboratory QC and these samples should be noted in the SDG Narrative as such. The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples.

Please let me know if you have any questions.
Thanks,

WHITLEE DEAN
Environmental Coordinator- Regions 3 and 5
CSC

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-----Original Message-----
From: Scott, Kevin [mailto:Kevin.Scott@tetratech.com]
Sent: Monday, October 27, 2014 12:29 PM
To: Dean, Whitlee
Cc: Alida Roberman; Carlene Thomas; Howard Pham; Tim Prendiville; Layne.warren@epa.gov; khughes@qepi.com
Subject: Re: Region 05 | Case 44782 | Lab SHEALY | Issue Multiple

Issue 1: The Case number is not listed on the COCs received by the laboratory. The sample tags list the Case number as 44782.
Resolution 1: In accordance with previous direction from Region 5, The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples under the scheduled Case number. The resolution may then be applied to the

remainder of the samples shipped under the same Case received with a COC that lists an incorrect Case number/the Case number field is left blank.
Issue 2: Samples E5AS7 and E5AT5 are designated for laboratory QC on the COC. However, only 3 vials for each sample was provided. The laboratory does not have sufficient volume to perform laboratory QC on these samples.
Resolution 2: Do not use Samples E5AS7 and E5AT5 for QAQC Samples. These samples should just be considered field samples.
Issue 3: The laboratory has received 19 samples for this Case thus far, with samples E5AS4, E5AS8, and E5AT4 having 9 vials each. Please note that one vial for sample E5AS8 was broken in transit however the laboratory still has sufficient volume for analysis. The laboratory assumed that these samples required laboratory QC, therefore they were placed into three different SDGs. Please advise if performing laboratory QC on E5AS4, E5AS8, and E5AT4 is acceptable.
Resolution 3: Samples E5AS4, E5AS8, and E5AT4 should be used as QAQC samples. Please note them on the SGD as QAQC samples

On Oct 27, 2014, at 9:32 AM, "Dean, Whitlee" <wdean9@fedcsc.com> wrote:

> Good morning,
>
> SHEALY is reporting the following issues. Issue 1 can be resolved with a standard answer. Please advise how the laboratory should proceed for Issues 2 and 3.
>
> Discrepancies with tags, jars, and/or COC
>
> Issue 1: The Case number is not listed on the COCs received by the laboratory. The sample tags list the Case number as 44782.
> Resolution 1: In accordance with previous direction from Region 5, The laboratory will note the issue in the SDG Narrative and proceed with the analysis of the samples under the scheduled Case number. The resolution may then be applied to the remainder of the samples shipped under the same Case received with a COC that lists an incorrect Case number/the Case number field is left blank.
>
> Insufficient/inappropriate designation of laboratory QC
>
> Issue 2: Samples E5AS7 and E5AT5 are designated for laboratory QC on the COC. However, only 3 vials for each sample was provided. The laboratory does not have sufficient volume to perform laboratory QC on these samples.
>
> Issue 3: The laboratory has received 19 samples for this Case thus far, with samples E5AS4, E5AS8, and E5AT4 having 9 vials each. Please note that one vial for sample E5AS8 was broken in transit however the laboratory still has sufficient volume for analysis. The laboratory assumed that these samples required laboratory QC, therefore they were placed into three different SDGs. Please advise if performing laboratory QC on E5AS4, E5AS8, and E5AT4 is acceptable.
>
> Please let me know if you have any questions.
>
> Thanks,
>
> WHITLEE DEAN
>

> Environmental Coordinator- Regions 3 and 5
>
> CSC
>
> 15000 Conference Center Drive, Chantilly, VA 20151
>
> Civil Division | t: 703-818-4367 | f: 703-818-4602 | wdean9@fedcsc.com | www.csc.com
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>
> ---
> -----Original Message-----
> From: Robert Zhu [mailto:rzhu@shealylab.com]
> Sent: Saturday, October 25, 2014 5:54 PM
> To: Dean, Whitlee
> Subject: Case 44782
>

> Whitlee,
>
> Attached are the COCs for the samples we have received so far. There are several issues:
> 1. Case number is not on the COCs. Sample tags have case# 44782.
>
> 2. Samples E5AS7 and E5AT5 are designated as lab QC on the COC, but only 3 vials each are provided. There is insufficient volume to perform lab QC on these samples.
>
> 3. Sample E5AS8 is not designated as lab QC on the COC, but 9 vials are provided. One of them was broken during transit. The lab has sufficient volume to perform analysis. Should lab QC be performed on this sample?
>
> 4. We have received 19 samples so far for this case. Three of them, E5AS4, E5AS8 and E5AT4, have 9 vials each. The lab assumed these three samples need lab QC performed. So these three samples have been placed into three different SDGs.
>
> Thanks,
> >
> Robert Zhu
>
> Technical Director

>
> Shealy Environmental Services, Inc.
>
> 803-227-3152 fax 803-791-9111
>
> rzhu@shealylab.com<mailto:rzhu@shealylab.com>
>
> www.shealylab.com<http://www.shealylab.com>
> -----Original Message-----
>
> From: D110 Copier-Printer [mailto:printer@shealylab.com]
>
> Sent: Saturday, October 25, 2014 5:45 PM
>
> To: Robert Zhu
>
> Subject: Scan from a Xerox D95/D110/D125
> Please open the attached document. It was scanned and sent to you using a Xerox D95/D110/D125.
> Number of Images: 3
>
> Attachment File Type: PDF
> Device Name: D110 Copier-Printer
>
> Device Location:
> For more information on Xerox products and solutions, please visit http://www.xerox.com/
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> <img-X25174508-0001.pdf>

Robert Zhu

From: Dean, Whitlee <wdean9@fedcsc.com>
Sent: Wednesday, October 29, 2014 9:06 AM
To: Robert Zhu; Kelly Price; Mariela Monge; Kelly Maberry
Cc: Alida Roberman; Carlene Thomas; Howard Pham; Tim Prendiville; Layne.warren@epa.gov; Scott, Kevin; Keith Hughes
Subject: Region 05 | Case 44782 | Lab SHEALY | Issue Return airbill information missing/incomplete | FINAL

Robert,

Issue: The laboratory requires cooler return information for this Case.
Resolution: Per Region 5, the laboratory will ship the coolers back to Keith Hughes of QEPI (address below). Two return airbills for these coolers were included in the sample shipment that was sent out on 10/28. The laboratory should note the issue in the SDG Narrative.

Quality Environmental Professionals, Inc. (QEPI)
1611 South Franklin Road
Indianapolis, Indiana 46239

Please let me know if you have any questions or problems. To waive any defect(s) associated with this issue, please contact your PO.

Thanks,

WHITLEE DEAN
Environmental Coordinator- Regions 3 and 5
CSC

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Civil Division | t: 703-818-4367 | f: 703-818-4602 | wdean9@fedcsc.com | www.csc.com

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From: Scott, Kevin [mailto:Kevin.Scott@tetratech.com]
Sent: Tuesday, October 28, 2014 5:13 PM
To: Dean, Whitlee; Keith Hughes
Cc: Alida Roberman; Carlene Thomas; Howard Pham; Tim Prendiville; Layne.warren@epa.gov
Subject: RE: Region 05 | Case 44782 | Lab SHEALY | Issue Return airbill information missing/incomplete

Hi Dean,
Please ship the coolers back to Keith Hughes of QEPI. Keith included two return airbills for these coolers in the sample shipment that went out today, so you should be receiving them tomorrow.

Quality Environmental Professionals, Inc. (QEPI)
1611 South Franklin Road
Indianapolis, Indiana 46239
317.351.4255

Kevin Scott

From: Dean, Whitlee [mailto:wdean9@fedcsc.com]
Sent: Tuesday, October 28, 2014 3:12 PM
To: Scott, Kevin; Keith Hughes
Cc: Alida Roberman; Carlene Thomas; Howard Pham; Tim Prendiville; Layne.warren@epa.gov
Subject: Region 05 | Case 44782 | Lab SHEALY | Issue Return airbill information missing/incomplete

Hello,

SHEALY is reporting the following issue. Please advise.

Issue: The laboratory requires cooler return information for this Case.

Please let me know if you have any questions.
Thanks,

WHITLEE DEAN
Environmental Coordinator- Regions 3 and 5
CSC

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From: Robert Zhu [mailto:rzhu@shealylab.com]
Sent: Tuesday, October 28, 2014 3:56 PM
To: Dean, Whitlee
Cc: Kelly Price; Mariela Monge; Kelly Maberry
Subject: Case 44782 Cooler return

Whitlee,

We did not receive cooler return info for this case. Could you provide?

Thanks,

Robert Zhu
Technical Director
Shealy Environmental Services, Inc.
803-227-3152 fax 803-791-9111
rzhu@shealylab.com
www.shealylab.com

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MANUAL INTEGRATION REPORT
VOA_TRACE

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

EPA SAMPLE NO.	Column 1 DB-624 0.25 (mm)	
VSTD005BD	2-Butanone-d5	

Page: 1 of 1

CASE: **44782**
SDG: **E5AT4**

Example Calculation for the Trace Volatile Fraction

RRF Calculation

RRF=(Ax*Cis)/(Ais*Cx)

Where: Ax=Area of the characteristic ion (EICP) for the compound to be measured
Ais=Area of the characteristic ion (EICP) for the specific internal standard
Cis=Concentration of the internal standard
Cx=Concentration of the compound to be measured

Example: Vinyl Chloride-d_3 from VSTD005ZV

Ax=	95534
Ais=	329714
Cis=	125
Cx=	125
RRF=	**0.28975**

Mean RRF from ICAL **0.32386**

Concentration Calculation

Concentration (ug/L)=(Ax*Is*Df)/(Ais*RRF*Vo)

Where: Ax=Area of the characteristic ion (EICP) for the compound to be measured
Ais=Area of the characteristic ion (EICP) for the specific internal standard
Is=Amount of the internal standard added, in nanograms
Mean RRF=Relative response factor from the Initial calibration standard
Vo=Total volume of water purged, in milliliters
Df=Dilution factor

Example: Vinyl Chloride-d_3 from E5AT4

Ax=	123510
Ais=	328742
Is=	125
Mean RRF=	0.32386
Vo=	25
Df=	1

Concentration (ug/L)= **5.800**

2A - FORM II VOA-1
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC1 (VCL) #	VDMC2 (CLA) #	VDMC3 (DCE) #	VDMC4 (BUT) #	VDMC5 (CLF) #	VDMC6 (DCA) #	VDMC7 (BEN) #
01	VBLKZS	113	117	84	85	100	94	102
02	E5AT4MS	105	99	92	96	97	101	98
03	E5AT4MSD	103	99	91	99	96	104	89
04	E5AT4	116	112	80	99	103	109	99
05	VBLKBD	119	115	89	112	115	123	102
06	VHBLK01	114	110	89	82	108	111	100
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	QC LIMITS
VDMC1 (VCL) = Vinyl chloride-d_3	(65-131)
VDMC2 (CLA) = Chloroethane-d_5	(71-131)
VDMC3 (DCE) = 1,1-Dichloroethene-d_2	(55-104)
VDMC4 (BUT) = 2-Butanone-d_5	(49-155)
VDMC5 (CLF) = Chloroform-d	(78-121)
VDMC6 (DCA) = 1,2-Dichloroethane-d_4	(78-129)
VDMC7 (BEN) = Benzene-d_6	(77-124)

Column to be used to flag recovery values
* Values outside of contract required QC limits

2B - FORM II VOA-2
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Level: (TRACE or LOW) TRACE

	EPA SAMPLE NO.	VDMC8 (DPA) #	VDMC9 (TOL) #	VDMC10 (TDP) #	VDMC11 (HEX) #	VDMC12 (DXE) #	VDMC13 (TCA) #	VDMC14 (DCZ) #	TOT
01	VBLKZS	101	100	94	94		92	104	0
02	E5AT4MS	102	100	101	96		92	103	0
03	E5AT4MSD	91	93	95	101		91	98	0
04	E5AT4	99	102	98	93		93	105	0
05	VBLKBD	101	109	116	108		100	113	0
06	VHBLK01	98	108	107	80		88	105	0
07									
08									
09									
10									
11									
12									
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26									
27									
28									
29									
30									

	QC LIMITS
VDMC8 (DPA) = 1,2-Dichloropropane-d_6	(79-124)
VDMC9 (TOL) = Toluene-d_8	(77-121)
VDMC10 (TDP) = trans-1,3-Dichloropropene-d_4	(73-121)
VDMC11 (HEX) = 2-Hexanone-d_5	(28-135)
VDMC12 (DXE) = 1,4-Dioxane-d_8	(50-150)
VDMC13 (TCA) = 1,1,2,2-Tetrachloroethane-d_2	(73-125)
VDMC14 (DCZ) = 1,2-Dichlorobenzene-d_4	(80-131)

Column to be used to flag recovery values
* Values outside of contract required QC limits
Report 1,4-Dioxane-d8 for Low-Medium VOA analysis only

3A - FORM III VOA-1

WATER VOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix Spike - EPA Sample No.: E5AT4 Level: (TRACE or LOW) Trace

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS %REC #	QC LIMITS REC.
1,1-Dichloroethene	5.0	0	3.7	75	61-145
Trichloroethene	5.0	0	4.7	93	71-120
Benzene	5.0	0	4.3	85	76-127
Toluene	5.0	0.062	4.9	97	76-125
Chlorobenzene	5.0	0	5.4	107	75-130

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD %REC #	%RPD #	QC LIMITS	
					RPD	REC.
1,1-Dichloroethene	5.0	3.8	76	2	0-14	61-145
Trichloroethene	5.0	4.3	87	7	0-14	71-120
Benzene	5.0	4.1	81	5	0-11	76-127
Toluene	5.0	4.8	95	3	0-13	76-125
Chlorobenzene	5.0	5.3	106	1	0-13	75-130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC Limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

COMMENTS: _____

EPA SAMPLE NO.

VBLKBD

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Lab File ID: 81105A05 Lab Sample ID: PQ60055-001

Instrument ID: MSD8

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 11/05/2014

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1127

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	VHBLK01	PJ25008-002	81105A06a	1205
02				
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09				
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COMMENTS: _____

EPA SAMPLE NO.

VBLKZS

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Lab File ID: 81102C07 Lab Sample ID: PQ59771-001

Instrument ID: MSD8

Matrix: (SOIL/SED/WATER) Water Date Analyzed: 11/02/2014

Level: (TRACE or LOW/MED) TRACE Time Analyzed: 1915

GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	E5AT4	PJ25008-001	81102C10	2057
02	E5AT4MS	PJ25008-001MS	81102C11	2125
03	E5AT4MSD	PJ25008-001MD	81102C12	2153
04				
05				
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COMMENTS: _____

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 11/02/2014 11/02/2014

EPA Sample No.(VSTD#####): VSTD005ZS Date Analyzed: 11/02/2014

Lab File ID (Standard): 81102C04 Time Analyzed: 1751

Instrument ID: MSD8 Heated Purge: (Y/N) N

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	240992	10.520	343626	6.860	117849	12.540
	UPPER LIMIT	337389	10.854	481077	7.186	164989	12.866
	LOWER LIMIT	144596	10.194	206176	6.526	70710	12.206
	EPA SAMPLE NO.						
01	VBLKZS	212156	10.520	304282	6.860	96605	12.54
02	E5AT4MS	268815	10.520	357179	6.860	117951	12.54
03	E5AT4MSD	268495	10.520	339427	6.860	121892	12.54
04	E5AT4	253680	10.520	328742	6.860	117546	12.54
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22							

IS1 (CBZ) = Chlorobenzene-d_5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d_4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 11/02/2014 11/02/2014

EPA Sample No.(VSTD#####): VSTD005ZV Date Analyzed: 11/03/2014

Lab File ID (Standard): 81102C22 Time Analyzed: 0232

Instrument ID: MSD8 Heated Purge: (Y/N) N

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	256943	10.520	329714	6.860	128830	12.540
	UPPER LIMIT	359721	10.854	461600	7.186	180362	12.866
	LOWER LIMIT	154166	10.194	197829	6.526	77298	12.206
	EPA SAMPLE NO.						
01	VBLKZS	212156	10.520	304282	6.860	96605	12.54
02	E5AT4MS	268815	10.520	357179	6.860	117951	12.54
03	E5AT4MSD	268495	10.520	339427	6.860	121892	12.54
04	E5AT4	253680	10.520	328742	6.860	117546	12.54
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IS1 (CBZ) = Chlorobenzene-d_5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d_4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 11/02/2014 11/02/2014

EPA Sample No.(VSTD#####): VSTD005BD Date Analyzed: 11/05/2014

Lab File ID (Standard): 81105A04 Time Analyzed: 1034

Instrument ID: MSD8 Heated Purge: (Y/N) N

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	158762	10.520	219508	6.860	84132	12.540
	UPPER LIMIT	222267	10.854	307312	7.186	117785	12.866
	LOWER LIMIT	95258	10.194	131705	6.526	50480	12.206
	EPA SAMPLE NO.						
01	VBLKBD	176049	10.520	231265	6.860	77738	12.54
02	VHBLK01	172426	10.520	230964	6.860	78390	12.54
03							
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22							

IS1 (CBZ) = Chlorobenzene-d_5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d_4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 11/02/2014 11/02/2014

EPA Sample No.(VSTD#####): VSTD005BF Date Analyzed: 11/05/2014

Lab File ID (Standard): 81105A23 Time Analyzed: 1952

Instrument ID: MSD8 Heated Purge: (Y/N) N

		IS1 (CBZ) AREA #	RT #	IS2 (DFB) AREA #	RT #	IS3 (DCB) AREA #	RT #
	12 HOUR STD	180769	10.520	244146	6.860	90552	12.540
	UPPER LIMIT	253077	10.854	341805	7.186	126773	12.866
	LOWER LIMIT	108462	10.194	146488	6.526	54332	12.206
	EPA SAMPLE NO.						
01	VBLKBD	176049	10.520	231265	6.860	77738	12.54
02	VHBLK01	172426	10.520	230964	6.860	78390	12.54
03							
04							
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IS1 (CBZ) = Chlorobenzene-d_5
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (DCB) = 1,4-Dichlorobenzene-d_4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area
AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area
RT UPPER LIMIT = + 0.50 (Low-Medium Volatiles) and + 0.33 (Trace Volatiles) minutes of internal standard RT
RT LOWER LIMIT = - 0.50 (Low-Medium Volatiles) and - 0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E5AT4

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C10

Level: (TRACE/LOW/MED) TRACE Date Received: 10/25/2014

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	47	E
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.19	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E5AT4

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C10

Level: (TRACE/LOW/MED) TRACE Date Received: 10/25/2014

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.062	J
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
E5AT4

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C10

Level: (TRACE or LOW/MED) TRACE Date Received: 10/25/2014

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
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26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E5AT4MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-001MS

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C11

Level: (TRACE/LOW/MED) TRACE Date Received: 10/25/2014

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	42	E
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	3.7	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.18	J
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	4.3	
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E5AT4MS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-001MS

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C11

Level: (TRACE/LOW/MED) TRACE Date Received: 10/25/2014

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
79-01-6	Trichloroethene	4.7	
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	4.9	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.4	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E5AT4MSD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-001MD

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C12

Level: (TRACE/LOW/MED) TRACE Date Received: 10/25/2014

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	44	E
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	3.8	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	4.1	
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E5AT4MSD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-001MD

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C12

Level: (TRACE/LOW/MED) TRACE Date Received: 10/25/2014

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
79-01-6	Trichloroethene	4.3	
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	4.8	
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	5.3	
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VBLKBD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PQ60055-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81105A05

Level: (TRACE/LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/05/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.068	J
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VBLKBD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PQ60055-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81105A05

Level: (TRACE/LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/05/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKBD

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PQ60055-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81105A05

Level: (TRACE or LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/05/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	1.430	14	J
02	363-72-4	Benzene, pentafluoro-	5.890	4.6	NJ
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VBLKZS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PQ59771-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C07

Level: (TRACE/LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	0.50	U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VBLKZS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PQ59771-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C07

Level: (TRACE/LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VBLKZS

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PQ59771-001

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81102C07

Level: (TRACE or LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/02/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
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16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VHBLK01

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-002

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81105A06a

Level: (TRACE/LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/05/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	0.50	U
74-87-3	Chloromethane	0.50	U
75-01-4	Vinyl chloride	0.50	U
74-83-9	Bromomethane	0.50	U
75-00-3	Chloroethane	0.50	U
75-69-4	Trichlorofluoromethane	0.50	U
75-35-4	1,1-Dichloroethene	0.50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	0.50	U
79-20-9	Methyl acetate	0.50	U
75-09-2	Methylene chloride	1.0 ~~0.15~~	JB U
156-60-5	trans-1,2-Dichloroethene	0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	U
75-34-3	1,1-Dichloroethane	0.50	U
156-59-2	cis-1,2-Dichloroethene	0.50	U
78-93-3	2-Butanone	5.0	U
74-97-5	Bromochloromethane	0.50	U
67-66-3	Chloroform	0.50	U
71-55-6	1,1,1-Trichloroethane	0.50	U
110-82-7	Cyclohexane	0.50	U
56-23-5	Carbon tetrachloride	0.50	U
71-43-2	Benzene	0.50	U
107-06-2	1,2-Dichloroethane	0.50	U

12/18/14

Report 1,4-Dioxane for Low-Medium VOA analysis only

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
VHBLK01

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-002

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81105A06a

Level: (TRACE/LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/05/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 25.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
79-01-6	Trichloroethene	0.50	U
108-87-2	Methylcyclohexane	0.50	U
78-87-5	1,2-Dichloropropane	0.50	U
75-27-4	Bromodichloromethane	0.50	U
10061-01-5	cis-1,3-Dichloropropene	0.50	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	0.50	U
10061-02-6	trans-1,3-Dichloropropene	0.50	U
79-00-5	1,1,2-Trichloroethane	0.50	U
127-18-4	Tetrachloroethene	0.50	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	0.50	U
106-93-4	1,2-Dibromoethane	0.50	U
108-90-7	Chlorobenzene	0.50	U
100-41-4	Ethylbenzene	0.50	U
95-47-6	o-Xylene	0.50	U
179601-23-1	m,p-Xylene	0.50	U
100-42-5	Styrene	0.50	U
75-25-2	Bromoform	0.50	U
98-82-8	Isopropylbenzene	0.50	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	U
541-73-1	1,3-Dichlorobenzene	0.50	U
106-46-7	1,4-Dichlorobenzene	0.50	U
95-50-1	1,2-Dichlorobenzene	0.50	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	U
120-82-1	1,2,4-Trichlorobenzene	0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
VHBLK01

Lab Name: Shealy Environmental Services, Inc. Contract: EP-W-11-035

Lab Code: SHEALY Case No.: 44782 Mod. Ref No.: _____ SDG No.: E5AT4

Matrix: (SOIL/SED/WATER) Water Lab Sample ID: PJ25008-002

Sample wt/vol: 25.0 (g/mL) mL Lab File ID: 81105A06a

Level: (TRACE or LOW/MED) TRACE Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/05/2014

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L Purge Volume: 25.0 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY ~ REGION V

ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: E5AT4 CERCLIS No: IND005101429

Case No: 44782 Site Name/Location: West Vermont Street Water (IN)

Contractor or EPA Lab: Shealy Data User: Tetra tech

No. of Samples: 1 Date Sampled or Date Received: 17 Nov 2014

Have Chain-of-Custody records been received? Yes X No_____
Have traffic reports or packing lists been received? Yes X No _____
If no, are traffic reports or packing list numbers written on the Chain-of-Custody Record?
Yes ____ No ____
If no, which traffic report or packing list numbers are missing?

_____ _____ _____ _____
_____ _____ _____ _____

Are basic data forms in? Yes X No____
No of samples claimed: 1 No. of samples received:_____

Received by: pfeffner Date: 17 Nov 14

Received by LSSS: pfeffner Date: 18 Nov 2014

Review started: 12/19/14 Reviewer Signature: Stephanie Tribbin

Total time spent on review: 4 hrs Date review completed: 12/22/14

Copied by: A. C. Harvey Date: December 29, 2014

Mailed to user by: pfeffner Date: 30 Dec 2014

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

Data received by: _____ Date:_____

Data review received by: _____ Date:_____

Inorganic Data Complete	[ ] Suitable for Intended Purpose [ ] T if OK
Organic Data Complete	[ ] Suitable for Intended Purpose [ ] T if OK
Dioxin data Complete	[ ] Suitable for Intended Purpose [ ] T if OK
SAS Data Complete	[ ] Suitable for Intended Purpose [ ] T if OK

PROBLEMS: Please indicate reasons why data are not suitable for your uses.

_____

_____

Received by Data Mgmt. Coordinator for Files. Date:_____

Edit History Report

Case No: 44782 Contract: EPW11035 SDG No: E5AT4 Lab Code: SHEALY

Method: VOA_Trace

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
E5AT4	Water	Vinyl chloride	Validation Flag		J	Steffanie Tobin	12/19/14 2:20 PM	
E5AT4MS	Water	1,1-Dichloroethene	Validated Result	0.50	3.7	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	1,1-Dichloroethene	Validated Result	3.7	0.50	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	1,1-Dichloroethene	Validation Flag	J		Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	1,1-Dichloroethene	Validation Flag	U	J	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	1,1-Dichloroethene	Validation Flag		U	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Benzene	Validated Result	5.0	4.3	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Benzene	Validated Result	0.50	5.0	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Benzene	Validated Result	4.3	0.50	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Benzene	Validation Flag	U		Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Benzene	Validation Flag		U	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Bromomethane	Validated Result	4.9	0.50	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Bromomethane	Validated Result	0.50	4.9	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Bromomethane	Validation Flag		U	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Bromomethane	Validation Flag	U		Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Chlorobenzene	Validated Result	0.50	5.4	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Chlorobenzene	Validated Result	5.4	0.50	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Chlorobenzene	Validation Flag	U		Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Chlorobenzene	Validation Flag		U	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Chloroethane	Validated Result	5.4	0.50	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Chloroethane	Validated Result	0.50	5.4	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Chloroethane	Validation Flag		U	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Chloroethane	Validation Flag	U		Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Chloromethane	Validated Result	4.3	5.0	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Chloromethane	Validated Result	0.50	4.3	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Chloromethane	Validation Flag		U	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Chloromethane	Validation Flag	U		Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Dichlorodifluoromethane	Validated Result	3.7	5.0	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Dichlorodifluoromethane	Validated Result	0.50	3.7	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Dichlorodifluoromethane	Validation Flag		U	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Dichlorodifluoromethane	Validation Flag	U		Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MS	Water	Toluene	Validated Result	0.50	4.9	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Toluene	Validated Result	4.9	0.50	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Toluene	Validation Flag	U		Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Toluene	Validation Flag		U	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Trichloroethene	Validated Result	42	4.7	Steffanie Tobin	12/19/14 2:55 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
E5AT4MS	Water	Trichloroethene	Validated Result	4.7	42	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Trichloroethene	Validation Flag	J		Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Trichloroethene	Validation Flag		J	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Vinyl chloride	Validated Result	4.7	42	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Vinyl chloride	Validated Result	42	4.7	Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Vinyl chloride	Validation Flag		J	Steffanie Tobin	12/19/14 2:55 PM	
E5AT4MS	Water	Vinyl chloride	Validation Flag	J		Steffanie Tobin	12/19/14 2:53 PM	
E5AT4MS	Water	Vinyl chloride	Validation Flag		J	Steffanie Tobin	12/19/14 2:21 PM	
E5AT4MSD	Water	Vinyl chloride	Validation Flag		J	Steffanie Tobin	12/19/14 2:21 PM	
VHBLK01	Water	Methylene chloride	Validated Result	0.15	1.0	Steffanie Tobin	12/19/14 2:22 PM	
VHBLK01	Water	Methylene chloride	Validation Flag	J	U	Steffanie Tobin	12/19/14 2:22 PM	