02-May-2017

Scott Smith
Water Defense
PO Box 204
Livingston Manor, NY 12758

Tel: (508) 345-6520
Fax:

Re: Flint [redacted] House Work Order: **1704551**

Dear Scott,

ALS Environmental received 2 samples on 17-Apr-2017 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 19.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Rob Nieman

Electronically approved by: Rob Nieman

Rob Nieman
Project Manager

ALS Environmental

Date: 02-May-17

Client: Water Defense
Project: Flint Ex. 6 - Personal Privacy House
Work Order: **1704551**

Work Order Sample Summary

Lab Samp ID	Client Sample ID	Matrix	Tag Number	Collection Date	Date Received	Hold
1704551-01	1- Shower Grab	Water		4/14/2017	4/17/2017	☐
1704551-02	2- Shower WaterBug Grab	Bulk		4/14/2017	4/17/2017	☐

ALS Environmental *Date: 02-May-17*

Client: Water Defense
Project: Flint [redacted] House
Work Order: 1704551

Case Narrative

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

Results relate only to the items tested and are not blank corrected unless indicated.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Environmental. Samples will be disposed in 30 days unless storage arrangements are made.

ALS Environmental

Date: *02-May-17*

Client: Water Defense
Project: Flint [redacted] House
Sample ID: 1- Shower Grab
Collection Date: 4/14/2017

Work Order: 1704551
Lab ID: 1704551-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **MRJ**
1,1,1,2-Tetrachloroethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,1,1-Trichloroethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,1,2,2-Tetrachloroethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,1,2-Trichloroethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,1-Dichloroethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,1-Dichloroethene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,1-Dichloropropene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2,3-Trichlorobenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2,3-Trichloropropane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2,4-Trichlorobenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2,4-Trimethylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2-Dibromo-3-chloropropane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2-Dibromoethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2-Dichlorobenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2-Dichloroethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,2-Dichloropropane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,3,5-Trimethylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,3-Dichlorobenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,3-Dichloropropane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
1,4-Dichlorobenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
2,2-Dichloropropane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
2-Butanone	ND		50	µg/L	1	4/20/2017 04:21 PM
2-Chlorotoluene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
2-Hexanone	ND		5.0	µg/L	1	4/20/2017 04:21 PM
4-Chlorotoluene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
4-Methyl-2-pentanone	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Acetone	ND		50	µg/L	1	4/20/2017 04:21 PM
Benzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Bromobenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Bromochloromethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Bromodichloromethane	**9.0**		**5.0**	**µg/L**	1	4/20/2017 04:21 PM
Bromoform	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Bromomethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Carbon disulfide	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Carbon tetrachloride	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Chlorobenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Chloroethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Chloroform	**30**		**5.0**	**µg/L**	1	4/20/2017 04:21 PM
Chloromethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM

Note:

ALS Environmental

Date: *02-May-17*

Client: Water Defense
Project: Flint [redacted] House
Sample ID: 1- Shower Grab
Collection Date: 4/14/2017

Work Order: 1704551
Lab ID: 1704551-01
Matrix: WATER

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
cis-1,2-Dichloroethene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
cis-1,3-Dichloropropene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Dibromochloromethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Dibromomethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Dichlorodifluoromethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Ethylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Hexachlorobutadiene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Isopropylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
m,p-Xylene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Methyl tert-butyl ether	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Methylene chloride	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Naphthalene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
n-Butylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
n-Propylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
o-Xylene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
p-Isopropyltoluene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
sec-Butylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Styrene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
tert-Butylbenzene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Tetrachloroethene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Toluene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
trans-1,2-Dichloroethene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
trans-1,3-Dichloropropene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Trichloroethene	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Trichlorofluoromethane	ND		5.0	µg/L	1	4/20/2017 04:21 PM
Vinyl chloride	ND		2.0	µg/L	1	4/20/2017 04:21 PM
Xylenes, Total	ND		10	µg/L	1	4/20/2017 04:21 PM
Surr: 4-Bromofluorobenzene	*92.3*		*61-131*	*%REC*	1	4/20/2017 04:21 PM
Surr: Dibromofluoromethane	*110*		*87-126*	*%REC*	1	4/20/2017 04:21 PM
Surr: Toluene-d8	*101*		*84-111*	*%REC*	1	4/20/2017 04:21 PM

Note:

ALS Environmental

Date: *02-May-17*

Client: Water Defense
Project: Flint House
Sample ID: 2- Shower WaterBug Grab
Collection Date: 4/14/2017

Work Order: 1704551
Lab ID: 1704551-02
Matrix: BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
VOLATILE ORGANIC COMPOUNDS			**SW8260B**			Analyst: **LAK**
1,1,1,2-Tetrachloroethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,1,1-Trichloroethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,1,2,2-Tetrachloroethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,1,2-Trichloroethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,1-Dichloroethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,1-Dichloroethene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,1-Dichloropropene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2,3-Trichlorobenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2,3-Trichloropropane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2,4-Trichlorobenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2,4-Trimethylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2-Dibromo-3-chloropropane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2-Dibromoethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2-Dichlorobenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2-Dichloroethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,2-Dichloropropane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,3,5-Trimethylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,3-Dichlorobenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,3-Dichloropropane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
1,4-Dichlorobenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
2,2-Dichloropropane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
2-Butanone	ND		250	µg/Kg	5	4/26/2017 10:40 AM
2-Chlorotoluene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
2-Hexanone	ND		25	µg/Kg	5	4/26/2017 10:40 AM
4-Chlorotoluene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
4-Methyl-2-pentanone	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Acetone	ND		250	µg/Kg	5	4/26/2017 10:40 AM
Benzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Bromobenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Bromochloromethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Bromodichloromethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Bromoform	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Bromomethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Carbon disulfide	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Carbon tetrachloride	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Chlorobenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Chloroethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Chloroform	**77**		**25**	**µg/Kg**	5	4/26/2017 10:40 AM
Chloromethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM

Note:

ALS Environmental

Date: *02-May-17*

Client: Water Defense
Project: Flint [redacted] House
Sample ID: 2- Shower WaterBug Grab
Collection Date: 4/14/2017

Work Order: 1704551
Lab ID: 1704551-02
Matrix: BULK

Analyses	Result	Qual	Report Limit	Units	Dilution Factor	Date Analyzed
cis-1,2-Dichloroethene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
cis-1,3-Dichloropropene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Dibromochloromethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Dibromomethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Dichlorodifluoromethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Ethylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Hexachlorobutadiene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Isopropylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
m,p-Xylene	**71**		**25**	**µg/Kg**	5	4/26/2017 10:40 AM
Methyl tert-butyl ether	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Methylene chloride	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Naphthalene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
n-Butylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
n-Propylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
o-Xylene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
p-Isopropyltoluene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
sec-Butylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Styrene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
tert-Butylbenzene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Tetrachloroethene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Toluene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
trans-1,2-Dichloroethene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
trans-1,3-Dichloropropene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Trichloroethene	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Trichlorofluoromethane	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Vinyl chloride	ND		25	µg/Kg	5	4/26/2017 10:40 AM
Xylenes, Total	ND		50	µg/Kg	5	4/26/2017 10:40 AM
Surr: 4-Bromofluorobenzene	*119*		*62.7-159*	*%REC*	5	4/26/2017 10:40 AM
Surr: Dibromofluoromethane	*97.6*		*67.3-136*	*%REC*	5	4/26/2017 10:40 AM
Surr: Toluene-d8	*98.8*		*83-124*	*%REC*	5	4/26/2017 10:40 AM

Note:

ALS Environmental

Date: 02-May-17

Client: Water Defense

Work Order: 1704551

Project: Flint Ex. 6 - Personal Privacy House

QC BATCH REPORT

Batch ID: **R139602** Instrument ID: **VMS1** Method: **SW8260B**

MBLK Sample ID: **MBLK-R139602** Units: **µg/L** Analysis Date: **4/20/2017 10:42 AM**

Client ID: Run ID: **VMS1_170420A** SeqNo: **1484762** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	50								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	50								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flint [redacted] House

QC BATCH REPORT

Batch ID: **R139602** Instrument ID: **VMS1** Method: **SW8260B**

Dibromochloromethane	ND	5.0					
Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	5.0					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	2.0					
Xylenes, Total	ND	10					
Surr: 4-Bromofluorobenzene	45.09	0	*50*	0	*90.2*	*61-131*	0
Surr: Dibromofluoromethane	54.55	0	*50*	0	*109*	*87-126*	0
Surr: Toluene-d8	51.21	0	*50*	0	*102*	*84-111*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flin[redacted]House

QC BATCH REPORT

Batch ID: **R139602** Instrument ID: **VMS1** Method: **SW8260B**

LCS Sample ID: **LCS-R139602** Units: **µg/L** Analysis Date: **4/20/2017 10:18 AM**
Client ID: Run ID: **VMS1_170420A** SeqNo: **1484761** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	48.03	5.0	50	0	96.1	48.4-140	0			
1,1-Dichloroethene	48.18	5.0	50	0	96.4	45.5-150	0			
1,2-Dichloroethane	52.56	5.0	50	0	105	46.5-141	0			
1,3-Dichlorobenzene	34.59	5.0	50	0	69.2	42.5-133	0			
1,4-Dichlorobenzene	33.15	5.0	50	0	66.3	38.9-136	0			
Benzene	44.53	5.0	50	0	89.1	50.7-134	0			
Carbon tetrachloride	47.71	5.0	50	0	95.4	45.5-143	0			
Chlorobenzene	38.87	5.0	50	0	77.7	45-133	0			
Chloroform	49.73	5.0	50	0	99.5	52.4-136	0			
cis-1,2-Dichloroethene	49.01	5.0	50	0	98	49.7-138	0			
Ethylbenzene	37.54	5.0	50	0	75.1	37.8-145	0			
m,p-Xylene	75.05	5.0	100	0	75	25.1-163	0			
Methyl tert-butyl ether	47.31	5.0	50	0	94.6	26.7-174	0			
Styrene	38.62	5.0	50	0	77.2	26.3-172	0			
Tetrachloroethene	38.94	5.0	50	0	77.9	37.3-139	0			
Toluene	43.09	5.0	50	0	86.2	44-135	0			
Trichloroethene	44.39	5.0	50	0	88.8	45.9-140	0			
Xylenes, Total	112.6	10	150	0	75.1	47.3-132	0			
Surr: 4-Bromofluorobenzene	47.21	0	*50*	0	*94.4*	*61-131*	0			
Surr: Dibromofluoromethane	53.79	0	*50*	0	*108*	*87-126*	0			
Surr: Toluene-d8	51.77	0	*50*	0	*104*	*84-111*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flint Ex. 6 - Personal Privacy House

QC BATCH REPORT

Batch ID: **R139602** Instrument ID: **VMS1** Method: **SW8260B**

MS Sample ID: **1704455-02A MS** Units: **µg/L** Analysis Date: **4/20/2017 12:10 PM**
Client ID: Run ID: **VMS1_170420A** SeqNo: **1484765** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	44.79	5.0	50	0	89.6	40.4-134	0			
1,1-Dichloroethene	46.41	5.0	50	0	92.8	45.3-151	0			
1,2-Dichloroethane	51.91	5.0	50	0	104	37-139	0			
1,3-Dichlorobenzene	28.47	5.0	50	0	56.9	42.9-121	0			
1,4-Dichlorobenzene	26.58	5.0	50	0	53.2	53.4-129	0			S
Benzene	42.02	5.0	50	0	84	37.4-144	0			
Carbon tetrachloride	42.99	5.0	50	0	86	33.8-150	0			
Chlorobenzene	33	5.0	50	0	66	52.4-132	0			
Chloroform	46.6	5.0	50	0	93.2	45.5-135	0			
cis-1,2-Dichloroethene	46.86	5.0	50	0	93.7	35.2-150	0			
Ethylbenzene	30.9	5.0	50	0	61.8	46.5-146	0			
m,p-Xylene	61.59	5.0	100	0	61.6	38.2-167	0			
Styrene	30.72	5.0	50	0	61.4	20.9-184	0			
Tetrachloroethene	34.38	5.0	50	4.5	59.8	55.2-134	0			
Toluene	37.24	5.0	50	0	74.5	32.7-140	0			
Trichloroethene	37.43	5.0	50	0	74.9	29.1-153	0			
Xylenes, Total	93.76	10	150	0	62.5	43.6-148	0			
Surr: 4-Bromofluorobenzene	47.13	0	*50*	0	*94.3*	*61-131*	0			
Surr: Dibromofluoromethane	53.94	0	*50*	0	*108*	*87-126*	0			
Surr: Toluene-d8	51.52	0	*50*	0	*103*	*84-111*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flin[redacted]House

QC BATCH REPORT

Batch ID: **R139602** Instrument ID: **VMS1** Method: **SW8260B**

MSD Sample ID: **1704455-02A MSD** Units: **µg/L** Analysis Date: **4/20/2017 12:36 PM**
Client ID: Run ID: **VMS1_170420A** SeqNo: **1484766** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.73	5.0	50	0	93.5	40.4-134	44.79	4.24	20	
1,1-Dichloroethene	45.67	5.0	50	0	91.3	45.3-151	46.41	1.61	20	
1,2-Dichloroethane	53.41	5.0	50	0	107	37-139	51.91	2.85	20	
1,3-Dichlorobenzene	32.72	5.0	50	0	65.4	42.9-121	28.47	13.9	20	
1,4-Dichlorobenzene	31.24	5.0	50	0	62.5	53.4-129	26.58	16.1	20	
Benzene	43.39	5.0	50	0	86.8	37.4-144	42.02	3.21	20	
Carbon tetrachloride	46.32	5.0	50	0	92.6	33.8-150	42.99	7.46	20	
Chlorobenzene	37.6	5.0	50	0	75.2	52.4-132	33	13	20	
Chloroform	48.64	5.0	50	0	97.3	45.5-135	46.6	4.28	20	
cis-1,2-Dichloroethene	47.59	5.0	50	0	95.2	35.2-150	46.86	1.55	21	
Ethylbenzene	35.72	5.0	50	0	71.4	46.5-146	30.9	14.5	20	
m,p-Xylene	70.7	5.0	100	0	70.7	38.2-167	61.59	13.8	20	
Styrene	34.6	5.0	50	0	69.2	20.9-184	30.72	11.9	20	
Tetrachloroethene	41.01	5.0	50	4.5	73	55.2-134	34.38	17.6	20	
Toluene	41.92	5.0	50	0	83.8	32.7-140	37.24	11.8	20	
Trichloroethene	42.94	5.0	50	0	85.9	29.1-153	37.43	13.7	20	
Xylenes, Total	106.7	10	150	0	71.1	43.6-148	93.76	12.9	20	
Surr: 4-Bromofluorobenzene	46.74	0	*50*	0	*93.5*	*61-131*	47.13	*0.831*		
Surr: Dibromofluoromethane	53.45	0	*50*	0	*107*	*87-126*	53.94	*0.913*		
Surr: Toluene-d8	51.13	0	*50*	0	*102*	*84-111*	51.52	*0.76*		

The following samples were analyzed in this batch: 1704551-01A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flint Ex. 6 - Personal Privacy House

QC BATCH REPORT

Batch ID: **R139815** Instrument ID: **VMS2** Method: **SW8260B**

MBLK Sample ID: **MBLK-R139815** Units: **µg/Kg** Analysis Date: **4/26/2017 07:16 AM**
Client ID: Run ID: **VMS2_170426A** SeqNo: **1489191** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1,2-Tetrachloroethane	ND	5.0								
1,1,1-Trichloroethane	ND	5.0								
1,1,2,2-Tetrachloroethane	ND	5.0								
1,1,2-Trichloroethane	ND	5.0								
1,1-Dichloroethane	ND	5.0								
1,1-Dichloroethene	ND	5.0								
1,1-Dichloropropene	ND	5.0								
1,2,3-Trichlorobenzene	ND	5.0								
1,2,3-Trichloropropane	ND	5.0								
1,2,4-Trichlorobenzene	ND	5.0								
1,2,4-Trimethylbenzene	ND	5.0								
1,2-Dibromo-3-chloropropane	ND	5.0								
1,2-Dibromoethane	ND	5.0								
1,2-Dichlorobenzene	ND	5.0								
1,2-Dichloroethane	ND	5.0								
1,2-Dichloropropane	ND	5.0								
1,3,5-Trimethylbenzene	ND	5.0								
1,3-Dichlorobenzene	ND	5.0								
1,3-Dichloropropane	ND	5.0								
1,4-Dichlorobenzene	ND	5.0								
2,2-Dichloropropane	ND	5.0								
2-Butanone	ND	50								
2-Chlorotoluene	ND	5.0								
2-Hexanone	ND	5.0								
4-Chlorotoluene	ND	5.0								
4-Methyl-2-pentanone	ND	5.0								
Acetone	ND	50								
Benzene	ND	5.0								
Bromobenzene	ND	5.0								
Bromochloromethane	ND	5.0								
Bromodichloromethane	ND	5.0								
Bromoform	ND	5.0								
Bromomethane	ND	5.0								
Carbon disulfide	ND	5.0								
Carbon tetrachloride	ND	5.0								
Chlorobenzene	ND	5.0								
Chloroethane	ND	5.0								
Chloroform	ND	5.0								
Chloromethane	ND	5.0								
cis-1,2-Dichloroethene	ND	5.0								
cis-1,3-Dichloropropene	ND	5.0								
Dibromochloromethane	ND	5.0								

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flint Ex. 6 - Personal Privacy House

QC BATCH REPORT

Batch ID: **R139815** Instrument ID: **VMS2** Method: **SW8260B**

Dibromomethane	ND	5.0					
Dichlorodifluoromethane	ND	5.0					
Ethylbenzene	ND	5.0					
Hexachlorobutadiene	ND	5.0					
Isopropylbenzene	ND	5.0					
m,p-Xylene	ND	5.0					
Methyl tert-butyl ether	ND	5.0					
Methylene chloride	ND	5.0					
Naphthalene	ND	5.0					
n-Butylbenzene	ND	5.0					
n-Propylbenzene	ND	5.0					
o-Xylene	ND	5.0					
p-Isopropyltoluene	ND	5.0					
sec-Butylbenzene	ND	5.0					
Styrene	ND	5.0					
tert-Butylbenzene	ND	5.0					
Tetrachloroethene	ND	5.0					
Toluene	ND	5.0					
trans-1,2-Dichloroethene	ND	5.0					
trans-1,3-Dichloropropene	ND	5.0					
Trichloroethene	ND	5.0					
Trichlorofluoromethane	ND	5.0					
Vinyl chloride	ND	5.0					
Xylenes, Total	ND	10					
Surr: 4-Bromofluorobenzene	47.52	0	*50*	0	*95*	*62.7-159*	0
Surr: Dibromofluoromethane	51.55	0	*50*	0	*103*	*67.3-136*	0
Surr: Toluene-d8	51.01	0	*50*	0	*102*	*83-124*	0

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flint [redacted] House

QC BATCH REPORT

Batch ID: **R139815** Instrument ID: **VMS2** Method: **SW8260B**

LCS Sample ID: **LCS-R139815** Units: **µg/Kg** Analysis Date: **4/26/2017 07:39 AM**
Client ID: Run ID: **VMS2_170426A** SeqNo: **1489192** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	43	5.0	50	0	86	53.6-149	0			
1,1-Dichloroethene	56.5	5.0	50	0	113	38.8-176	0			
1,2-Dichloroethane	47.7	5.0	50	0	95.4	54.4-145	0			
1,3-Dichlorobenzene	45.28	5.0	50	0	90.6	54.2-137	0			
1,4-Dichlorobenzene	44.24	5.0	50	0	88.5	52.8-135	0			
Benzene	48.25	5.0	50	0	96.5	56-148	0			
Carbon tetrachloride	41.62	5.0	50	0	83.2	51.9-151	0			
Chlorobenzene	49.12	5.0	50	0	98.2	55.4-137	0			
Chloroform	58.58	5.0	50	0	117	51.1-147	0			
cis-1,2-Dichloroethene	57.78	5.0	50	0	116	47.6-149	0			
Ethylbenzene	50.32	5.0	50	0	101	55.8-142	0			
m,p-Xylene	109	5.0	100	0	109	57.6-141	0			
Styrene	52.54	5.0	50	0	105	59.6-143	0			
Tetrachloroethene	47	5.0	50	0	94	56.2-160	0			
Toluene	50.49	5.0	50	0	101	56-143	0			
Trichloroethene	44.59	5.0	50	0	89.2	56.5-143	0			
Surr: 4-Bromofluorobenzene	49.74	0	*50*	0	*99.5*	*62.7-159*	0			
Surr: Dibromofluoromethane	54.07	0	*50*	0	*108*	*67.3-136*	0			
Surr: Toluene-d8	54.25	0	*50*	0	*108*	*83-124*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flint [redacted] House

QC BATCH REPORT

Batch ID: **R139815** Instrument ID: **VMS2** Method: **SW8260B**

MS Sample ID: **1704531-01A MS** Units: **µg/Kg** Analysis Date: **4/26/2017 08:30 AM**
Client ID: Run ID: **VMS2_170426A** SeqNo: **1489193** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	46.75	5.0	50	0	93.5	66.9-140	0			
1,1-Dichloroethene	50.96	5.0	50	0	102	41.4-161	0			
1,2-Dichloroethane	48.16	5.0	50	0	96.3	58.9-137	0			
1,3-Dichlorobenzene	45.65	5.0	50	0	91.3	56.3-126	0			
1,4-Dichlorobenzene	46.46	5.0	50	0	92.9	58.3-122	0			
Benzene	51.5	5.0	50	0	103	35.8-162	0			
Carbon tetrachloride	48.27	5.0	50	0	96.5	53.2-137	0			
Chlorobenzene	49.26	5.0	50	0	98.5	65.6-137	0			
Chloroform	51.96	5.0	50	0	104	58-130	0			
cis-1,2-Dichloroethene	51.82	5.0	50	0	104	52.9-138	0			
Ethylbenzene	51.07	5.0	50	1.01	100	57.5-134	0			
m,p-Xylene	110.5	5.0	100	4.41	106	56.4-135	0			
Styrene	53.46	5.0	50	0	107	60.9-135	0			
Tetrachloroethene	48.11	5.0	50	0	96.2	52.1-160	0			
Toluene	44.18	5.0	50	0	88.4	67.7-135	0			
Trichloroethene	49.44	5.0	50	0	98.9	56.5-136	0			
Surr: 4-Bromofluorobenzene	49.69	0	*50*	0	*99.4*	*62.7-159*	0			
Surr: Dibromofluoromethane	49.87	0	*50*	0	*99.7*	*67.3-136*	0			
Surr: Toluene-d8	55.75	0	*50*	0	*112*	*83-124*	0			

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Water Defense
Work Order: 1704551
Project: Flint Ex. 6 - Personal Privacy House

QC BATCH REPORT

Batch ID: **R139815** Instrument ID: **VMS2** Method: **SW8260B**

MSD Sample ID: **1704531-01A MSD** Units: **µg/Kg** Analysis Date: **4/26/2017 08:58 AM**
Client ID: Run ID: **VMS2_170426A** SeqNo: **1489194** Prep Date: DF: **1**

Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
1,1,1-Trichloroethane	43.51	5.0	50	0	87	66.9-140	46.75	7.18	31.2	
1,1-Dichloroethene	49.61	5.0	50	0	99.2	41.4-161	50.96	2.68	38.1	
1,2-Dichloroethane	42.8	5.0	50	0	85.6	58.9-137	48.16	11.8	26.2	
1,3-Dichlorobenzene	42.71	5.0	50	0	85.4	56.3-126	45.65	6.65	21	
1,4-Dichlorobenzene	43.44	5.0	50	0	86.9	58.3-122	46.46	6.72	28.7	
Benzene	46.6	5.0	50	0	93.2	35.8-162	51.5	9.99	23.6	
Carbon tetrachloride	43.11	5.0	50	0	86.2	53.2-137	48.27	11.3	32.3	
Chlorobenzene	45.23	5.0	50	0	90.5	65.6-137	49.26	8.53	20	
Chloroform	48.15	5.0	50	0	96.3	58-130	51.96	7.61	28.2	
cis-1,2-Dichloroethene	49.27	5.0	50	0	98.5	52.9-138	51.82	5.05	23.7	
Ethylbenzene	48	5.0	50	1.01	94	57.5-134	51.07	6.2	24.9	
m,p-Xylene	103.1	5.0	100	4.41	98.7	56.4-135	110.5	6.94	25.1	
Styrene	50.35	5.0	50	0	101	60.9-135	53.46	5.99	22.8	
Tetrachloroethene	45.2	5.0	50	0	90.4	52.1-160	48.11	6.24	24.7	
Toluene	47.39	5.0	50	0	94.8	67.7-135	44.18	7.01	20	
Trichloroethene	45.44	5.0	50	0	90.9	56.5-136	49.44	8.43	20	
Surr: 4-Bromofluorobenzene	50.06	0	*50*	0	*100*	*62.7-159*	49.69	*0.742*		
Surr: Dibromofluoromethane	47.39	0	*50*	0	*94.8*	*67.3-136*	49.87	*5.1*		
Surr: Toluene-d8	43.44	0	*50*	0	*86.9*	*83-124*	55.75	*24.8*		

The following samples were analyzed in this batch: 1704551-02A

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 02-May-17

Client: Water Defense
Project: Flint [redacted] House
WorkOrder: **1704551**

QUALIFIERS, ACRONYMS, UNITS

Qualifier	Description
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated MethodBlank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is >4 times amount spiked
P	Dual Column results percent difference >40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory controllimits
U	Analyzed but not detected above the MDL

Acronym	Description
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitaion Limit
SDL	Sample Detection Limit
SW	SW-846 Method

Units Reported	Description
µg/Kg	
µg/L	

ALS Environmental

Sample Receipt Checklist

Client Name: **WATERDEFENSE -HURLEYVUL** Date/Time Received: **17-Apr-17 00:00**

Work Order: **1704551** Received by: **PCD**

Checklist completed by: Robin Nieman (eSignature) 18-Apr-17 (Date) Reviewed by: Robin Nieman (eSignature) 18-Apr-17 (Date)

Matrices:

Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☐	No ☑	
Chain of custody signed when relinquished and received?	Yes ☐	No ☑	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐	
Temperature(s)/Thermometer(s):			
Cooler(s)/Kit(s):			
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☐
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☐
pH adjusted?	Yes ☐	No ☐	N/A ☐
pH adjusted by:			

Login Notes:

Client Contacted: Date Contacted: Person Contacted:

Contacted By: Regarding:

Comments:

Corrective Action: