TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Buffalo
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Amherst, NY 14228-2298
Tel: (716)691-2600

TestAmerica Job ID: 480-121119-1
Client Project/Site: Frewsburg Site #907016

For:
New York State D.E.C.
270 Michigan Avenue
Buffalo, New York 14203

Attn: Mr. Maurice Moore

Authorized for release by:
7/27/2017 8:44:38 AM

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Orlette Johnson
Senior Project Manager
7/27/2017 8:44:38 AM

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Definitions/Glossary

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.

Glossary

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

Case Narrative

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Job ID: 480-121119-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-121119-1

Receipt
The samples were received on 7/14/2017 9:45 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.4° C.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-368009 recovered outside acceptance criteria, low biased, for Chloromethane. A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated samples were non-detect for this analyte, the data have been reported. The following samples are impacted:Treatment Effluent (480-121119-1) and Treatment Trip Blank (480-121119-3).

Method(s) 8260C: Due to the co-elution of Ethyl Acetate with 2-Butanone and n-butyl Acetate with 2-Hexanone the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) associated with batch 480-368009. The following samples were affected : Treatment Effluent (480-121119-1) and Treatment Trip Blank (480-121119-3).

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: Treatment Influent (480-121119-2), (480-121119-B-2 MS) and (480-121119-B-2 MSD). Elevated reporting limits (RLs) are provided.

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

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

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

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

Detection Summary

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Client Sample ID: Treatment Effluent — Lab Sample ID: 480-121119-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	0.34	J	1.0	0.31	ug/L	1		8260C	Total/NA
Acetone	3.5	J	10	3.0	ug/L	1		8260C	Total/NA
Trichloroethene	0.52	J	1.0	0.46	ug/L	1		8260C	Total/NA
Iron	0.23		0.050	0.019	mg/L	1		200.7 Rev 4.4	Total/NA
Zinc	0.21		0.010	0.0015	mg/L	1		200.7 Rev 4.4	Total/NA

Client Sample ID: Treatment Influent — Lab Sample ID: 480-121119-2

No Detections.

Client Sample ID: Treatment Trip Blank — Lab Sample ID: 480-121119-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.51	J	1.0	0.46	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: Treatment Effluent

Lab Sample ID: 480-121119-1

Date Collected: 07/13/17 10:00

Matrix: Water

Date Received: 07/14/17 09:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/21/17 03:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/21/17 03:29	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/21/17 03:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**0.34**	**J**	1.0	0.31	ug/L			07/21/17 03:29	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/21/17 03:29	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/21/17 03:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/21/17 03:29	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/21/17 03:29	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/21/17 03:29	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/17 03:29	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/21/17 03:29	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/21/17 03:29	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/21/17 03:29	1
2-Butanone (MEK)	ND	*	10	1.3	ug/L			07/21/17 03:29	1
2-Hexanone	ND	*	5.0	1.2	ug/L			07/21/17 03:29	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/21/17 03:29	1
Acetone	**3.5**	**J**	10	3.0	ug/L			07/21/17 03:29	1
Benzene	ND		1.0	0.41	ug/L			07/21/17 03:29	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/21/17 03:29	1
Bromoform	ND		1.0	0.26	ug/L			07/21/17 03:29	1
Bromomethane	ND		1.0	0.69	ug/L			07/21/17 03:29	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/21/17 03:29	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/21/17 03:29	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/21/17 03:29	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/21/17 03:29	1
Chloroethane	ND		1.0	0.32	ug/L			07/21/17 03:29	1
Chloroform	ND		1.0	0.34	ug/L			07/21/17 03:29	1
Chloromethane	ND		1.0	0.35	ug/L			07/21/17 03:29	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/21/17 03:29	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/21/17 03:29	1
Cyclohexane	ND		1.0	0.18	ug/L			07/21/17 03:29	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/21/17 03:29	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/21/17 03:29	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/21/17 03:29	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/21/17 03:29	1
Methyl acetate	ND		2.5	1.3	ug/L			07/21/17 03:29	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/21/17 03:29	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/21/17 03:29	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/21/17 03:29	1
Styrene	ND		1.0	0.73	ug/L			07/21/17 03:29	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/21/17 03:29	1
Toluene	ND		1.0	0.51	ug/L			07/21/17 03:29	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/21/17 03:29	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/21/17 03:29	1
Trichloroethene	**0.52**	**J**	1.0	0.46	ug/L			07/21/17 03:29	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/21/17 03:29	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/21/17 03:29	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/21/17 03:29	1

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Client Sample ID: Treatment Effluent
Date Collected: 07/13/17 10:00
Date Received: 07/14/17 09:45

Lab Sample ID: 480-121119-1
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 120*		*07/21/17 03:29*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*77 - 120*		*07/21/17 03:29*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*07/21/17 03:29*	*1*
Dibromofluoromethane (Surr)	*103*		*75 - 123*		*07/21/17 03:29*	*1*

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		07/18/17 08:25	07/18/17 23:27	1
Iron	**0.23**		0.050	0.019	mg/L		07/18/17 08:25	07/18/17 23:27	1
Zinc	**0.21**		0.010	0.0015	mg/L		07/18/17 08:25	07/18/17 23:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	ND		4.8	1.3	mg/L		07/19/17 11:38	07/19/17 11:38	1

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Client Sample ID: Treatment Influent
Date Collected: 07/13/17 10:15
Date Received: 07/14/17 09:45

Lab Sample ID: 480-121119-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/26/17 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*71 - 144*		*07/26/17 15:23*	*1*
4-Bromofluorobenzene	*96*		*72 - 133*		*07/26/17 15:23*	*1*

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Client Sample ID: Treatment Trip Blank
Date Collected: 07/13/17 00:00
Date Received: 07/14/17 09:45

Lab Sample ID: 480-121119-3
Matrix: Water

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/21/17 04:19	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/21/17 04:19	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/21/17 04:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/21/17 04:19	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/21/17 04:19	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/21/17 04:19	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/21/17 04:19	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/21/17 04:19	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/21/17 04:19	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/21/17 04:19	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/21/17 04:19	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/21/17 04:19	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/21/17 04:19	1
2-Butanone (MEK)	ND	*	10	1.3	ug/L			07/21/17 04:19	1
2-Hexanone	ND	*	5.0	1.2	ug/L			07/21/17 04:19	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/21/17 04:19	1
Acetone	ND		10	3.0	ug/L			07/21/17 04:19	1
Benzene	ND		1.0	0.41	ug/L			07/21/17 04:19	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/21/17 04:19	1
Bromoform	ND		1.0	0.26	ug/L			07/21/17 04:19	1
Bromomethane	ND		1.0	0.69	ug/L			07/21/17 04:19	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/21/17 04:19	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/21/17 04:19	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/21/17 04:19	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/21/17 04:19	1
Chloroethane	ND		1.0	0.32	ug/L			07/21/17 04:19	1
Chloroform	ND		1.0	0.34	ug/L			07/21/17 04:19	1
Chloromethane	ND		1.0	0.35	ug/L			07/21/17 04:19	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/21/17 04:19	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/21/17 04:19	1
Cyclohexane	ND		1.0	0.18	ug/L			07/21/17 04:19	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/21/17 04:19	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/21/17 04:19	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/21/17 04:19	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/21/17 04:19	1
Methyl acetate	ND		2.5	1.3	ug/L			07/21/17 04:19	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/21/17 04:19	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/21/17 04:19	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/21/17 04:19	1
Styrene	ND		1.0	0.73	ug/L			07/21/17 04:19	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/21/17 04:19	1
Toluene	ND		1.0	0.51	ug/L			07/21/17 04:19	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/21/17 04:19	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/21/17 04:19	1
Trichloroethene	**0.51**	**J**	1.0	0.46	ug/L			07/21/17 04:19	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/21/17 04:19	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/21/17 04:19	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/21/17 04:19	1

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Client Sample ID: Treatment Trip Blank
Date Collected: 07/13/17 00:00
Date Received: 07/14/17 09:45

Lab Sample ID: 480-121119-3
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 120		07/21/17 04:19	1
1,2-Dichloroethane-d4 (Surr)	102		77 - 120		07/21/17 04:19	1
4-Bromofluorobenzene (Surr)	100		73 - 120		07/21/17 04:19	1
Dibromofluoromethane (Surr)	104		75 - 123		07/21/17 04:19	1

Surrogate Summary

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Method: 8260C - Volatile Organic Compounds by GC/MS

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

		Percent Surrogate Recovery (Acceptance Limits)			
		TOL	12DCE	BFB	DBFM
Lab Sample ID	Client Sample ID	(80-120)	(77-120)	(73-120)	(75-123)
480-121119-1	Treatment Effluent	101	102	99	103
480-121119-3	Treatment Trip Blank	103	102	100	104
LCS 480-368009/4	Lab Control Sample	100	98	98	92
MB 480-368009/7	Method Blank	102	100	100	99

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		12DCE	BFB	
Lab Sample ID	Client Sample ID	(71-144)	(72-133)	
480-121119-2	Treatment Influent	93	96	
LCS 460-451912/3	Lab Control Sample	95	94	
LCSD 460-451912/4	Lab Control Sample Dup	97	96	
MB 460-451912/7	Method Blank	93	94	

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 480-368009/7
Matrix: Water
Analysis Batch: 368009

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.82	ug/L			07/20/17 23:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			07/20/17 23:06	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			07/20/17 23:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			07/20/17 23:06	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			07/20/17 23:06	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			07/20/17 23:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			07/20/17 23:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			07/20/17 23:06	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			07/20/17 23:06	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			07/20/17 23:06	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			07/20/17 23:06	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			07/20/17 23:06	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			07/20/17 23:06	1
2-Butanone (MEK)	ND		10	1.3	ug/L			07/20/17 23:06	1
2-Hexanone	ND		5.0	1.2	ug/L			07/20/17 23:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			07/20/17 23:06	1
Acetone	ND		10	3.0	ug/L			07/20/17 23:06	1
Benzene	ND		1.0	0.41	ug/L			07/20/17 23:06	1
Bromodichloromethane	ND		1.0	0.39	ug/L			07/20/17 23:06	1
Bromoform	ND		1.0	0.26	ug/L			07/20/17 23:06	1
Bromomethane	ND		1.0	0.69	ug/L			07/20/17 23:06	1
Carbon disulfide	ND		1.0	0.19	ug/L			07/20/17 23:06	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			07/20/17 23:06	1
Chlorobenzene	ND		1.0	0.75	ug/L			07/20/17 23:06	1
Dibromochloromethane	ND		1.0	0.32	ug/L			07/20/17 23:06	1
Chloroethane	ND		1.0	0.32	ug/L			07/20/17 23:06	1
Chloroform	ND		1.0	0.34	ug/L			07/20/17 23:06	1
Chloromethane	ND		1.0	0.35	ug/L			07/20/17 23:06	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			07/20/17 23:06	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			07/20/17 23:06	1
Cyclohexane	ND		1.0	0.18	ug/L			07/20/17 23:06	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			07/20/17 23:06	1
Ethylbenzene	ND		1.0	0.74	ug/L			07/20/17 23:06	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			07/20/17 23:06	1
Isopropylbenzene	ND		1.0	0.79	ug/L			07/20/17 23:06	1
Methyl acetate	ND		2.5	1.3	ug/L			07/20/17 23:06	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			07/20/17 23:06	1
Methylcyclohexane	ND		1.0	0.16	ug/L			07/20/17 23:06	1
Methylene Chloride	ND		1.0	0.44	ug/L			07/20/17 23:06	1
Styrene	ND		1.0	0.73	ug/L			07/20/17 23:06	1
Tetrachloroethene	ND		1.0	0.36	ug/L			07/20/17 23:06	1
Toluene	ND		1.0	0.51	ug/L			07/20/17 23:06	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			07/20/17 23:06	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			07/20/17 23:06	1
Trichloroethene	ND		1.0	0.46	ug/L			07/20/17 23:06	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			07/20/17 23:06	1
Vinyl chloride	ND		1.0	0.90	ug/L			07/20/17 23:06	1
Xylenes, Total	ND		2.0	0.66	ug/L			07/20/17 23:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*102*		*80 - 120*		*07/20/17 23:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*77 - 120*		*07/20/17 23:06*	*1*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*		*07/20/17 23:06*	*1*
Dibromofluoromethane (Surr)	*99*		*75 - 123*		*07/20/17 23:06*	*1*

Lab Sample ID: LCS 480-368009/4
Matrix: Water
Analysis Batch: 368009

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	25.0	20.4		ug/L		82	73 - 126
1,1,2,2-Tetrachloroethane	25.0	23.8		ug/L		95	76 - 120
1,1,2-Trichloroethane	25.0	22.9		ug/L		92	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	20.6		ug/L		82	61 - 148
1,1-Dichloroethane	25.0	21.3		ug/L		85	77 - 120
1,1-Dichloroethene	25.0	20.1		ug/L		80	66 - 127
1,2,4-Trichlorobenzene	25.0	22.5		ug/L		90	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	24.1		ug/L		96	56 - 134
1,2-Dichlorobenzene	25.0	23.6		ug/L		94	80 - 124
1,2-Dichloroethane	25.0	21.2		ug/L		85	75 - 120
1,2-Dichloropropane	25.0	21.5		ug/L		86	76 - 120
1,3-Dichlorobenzene	25.0	23.2		ug/L		93	77 - 120
1,4-Dichlorobenzene	25.0	23.1		ug/L		92	80 - 120
2-Butanone (MEK)	125	195	*	ug/L		156	57 - 140
2-Hexanone	125	174	*	ug/L		139	65 - 127
4-Methyl-2-pentanone (MIBK)	125	116		ug/L		93	71 - 125
Acetone	125	125		ug/L		100	56 - 142
Benzene	25.0	21.0		ug/L		84	71 - 124
Bromodichloromethane	25.0	21.7		ug/L		87	80 - 122
Bromoform	25.0	22.8		ug/L		91	61 - 132
Bromomethane	25.0	20.6		ug/L		82	55 - 144
Carbon disulfide	25.0	20.7		ug/L		83	59 - 134
Carbon tetrachloride	25.0	20.3		ug/L		81	72 - 134
Chlorobenzene	25.0	23.1		ug/L		92	80 - 120
Dibromochloromethane	25.0	22.8		ug/L		91	75 - 125
Chloroethane	25.0	19.9		ug/L		79	69 - 136
Chloroform	25.0	21.0		ug/L		84	73 - 127
Chloromethane	25.0	17.6		ug/L		71	68 - 124
cis-1,2-Dichloroethene	25.0	21.2		ug/L		85	74 - 124
cis-1,3-Dichloropropene	25.0	21.1		ug/L		84	74 - 124
Cyclohexane	25.0	20.0		ug/L		80	59 - 135
Dichlorodifluoromethane	25.0	17.0		ug/L		68	59 - 135
Ethylbenzene	25.0	22.8		ug/L		91	77 - 123
1,2-Dibromoethane	25.0	23.2		ug/L		93	77 - 120
Isopropylbenzene	25.0	22.5		ug/L		90	77 - 122
Methyl acetate	125	107		ug/L		86	74 - 133
Methyl tert-butyl ether	25.0	21.2		ug/L		85	77 - 120
Methylcyclohexane	25.0	20.4		ug/L		82	68 - 134
Methylene Chloride	25.0	22.1		ug/L		88	75 - 124
Styrene	25.0	22.7		ug/L		91	80 - 120
Tetrachloroethene	25.0	27.9		ug/L		111	74 - 122
Toluene	25.0	22.9		ug/L		91	80 - 122
trans-1,2-Dichloroethene	25.0	20.8		ug/L		83	73 - 127

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

Lab Sample ID: LCS 480-368009/4
Matrix: Water
Analysis Batch: 368009

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	25.0	23.2		ug/L		93	80 - 120
Trichloroethene	25.0	20.9		ug/L		84	74 - 123
Trichlorofluoromethane	25.0	19.9		ug/L		80	62 - 150
Vinyl chloride	25.0	18.9		ug/L		75	65 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 120*
1,2-Dichloroethane-d4 (Surr)	*98*		*77 - 120*
4-Bromofluorobenzene (Surr)	*98*		*73 - 120*
Dibromofluoromethane (Surr)	*92*		*75 - 123*

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

Lab Sample ID: MB 460-451912/7
Matrix: Water
Analysis Batch: 451912

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.40	0.20	ug/L			07/26/17 07:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*71 - 144*		*07/26/17 07:52*	*1*
4-Bromofluorobenzene	*94*		*72 - 133*		*07/26/17 07:52*	*1*

Lab Sample ID: LCS 460-451912/3
Matrix: Water
Analysis Batch: 451912

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	5.00	5.27		ug/L		105	66 - 135

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*71 - 144*
4-Bromofluorobenzene	*94*		*72 - 133*

Lab Sample ID: LCSD 460-451912/4
Matrix: Water
Analysis Batch: 451912

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	5.00	4.99		ug/L		100	66 - 135	5	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*71 - 144*
4-Bromofluorobenzene	*96*		*72 - 133*

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-367264/1-A
Matrix: Water
Analysis Batch: 367661

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367264

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		07/18/17 08:25	07/18/17 23:20	1
Iron	ND		0.050	0.019	mg/L		07/18/17 08:25	07/18/17 23:20	1
Zinc	ND		0.010	0.0015	mg/L		07/18/17 08:25	07/18/17 23:20	1

Lab Sample ID: LCS 480-367264/2-A
Matrix: Water
Analysis Batch: 367661

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367264

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.44		mg/L		94	85 - 115
Iron	10.0	9.91		mg/L		99	85 - 115
Zinc	0.200	0.200		mg/L		100	85 - 115

Lab Sample ID: 480-121119-1 MS
Matrix: Water
Analysis Batch: 367661

Client Sample ID: Treatment Effluent
Prep Type: Total/NA
Prep Batch: 367264

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	ND		10.0	9.57		mg/L		96	70 - 130
Iron	0.23		10.0	10.09		mg/L		99	70 - 130
Zinc	0.21		0.200	0.410		mg/L		101	70 - 130

Lab Sample ID: 480-121119-1 MSD
Matrix: Water
Analysis Batch: 367661

Client Sample ID: Treatment Effluent
Prep Type: Total/NA
Prep Batch: 367264

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aluminum	ND		10.0	9.54		mg/L		95	70 - 130	0	20
Iron	0.23		10.0	10.14		mg/L		99	70 - 130	0	20
Zinc	0.21		0.200	0.417		mg/L		104	70 - 130	2	20

Method: 1664B - HEM and SGT-HEM

Lab Sample ID: MB 480-367710/1-A
Matrix: Water
Analysis Batch: 367758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 367710

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	ND		5.0	1.4	mg/L		07/19/17 11:38	07/19/17 11:38	1

Lab Sample ID: LCS 480-367710/2-A
Matrix: Water
Analysis Batch: 367758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 367710

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oil & Grease	39.9	33.83		mg/L		85	78 - 114

QC Association Summary

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

GC/MS VOA

Analysis Batch: 368009

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-121119-1	Treatment Effluent	Total/NA	Water	8260C	
480-121119-3	Treatment Trip Blank	Total/NA	Water	8260C	
MB 480-368009/7	Method Blank	Total/NA	Water	8260C	
LCS 480-368009/4	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 451912

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-121119-2	Treatment Influent	Total/NA	Water	8260C SIM	
MB 460-451912/7	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-451912/3	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-451912/4	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

Metals

Prep Batch: 367264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-121119-1	Treatment Effluent	Total/NA	Water	200.7	
MB 480-367264/1-A	Method Blank	Total/NA	Water	200.7	
LCS 480-367264/2-A	Lab Control Sample	Total/NA	Water	200.7	
480-121119-1 MS	Treatment Effluent	Total/NA	Water	200.7	
480-121119-1 MSD	Treatment Effluent	Total/NA	Water	200.7	

Analysis Batch: 367661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-121119-1	Treatment Effluent	Total/NA	Water	200.7 Rev 4.4	367264
MB 480-367264/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	367264
LCS 480-367264/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	367264
480-121119-1 MS	Treatment Effluent	Total/NA	Water	200.7 Rev 4.4	367264
480-121119-1 MSD	Treatment Effluent	Total/NA	Water	200.7 Rev 4.4	367264

General Chemistry

Prep Batch: 367710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-121119-1	Treatment Effluent	Total/NA	Water	1664B	
MB 480-367710/1-A	Method Blank	Total/NA	Water	1664B	
LCS 480-367710/2-A	Lab Control Sample	Total/NA	Water	1664B	

Analysis Batch: 367758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-121119-1	Treatment Effluent	Total/NA	Water	1664B	367710
MB 480-367710/1-A	Method Blank	Total/NA	Water	1664B	367710
LCS 480-367710/2-A	Lab Control Sample	Total/NA	Water	1664B	367710

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Client Sample ID: Treatment Effluent
Lab Sample ID: 480-121119-1
Date Collected: 07/13/17 10:00
Matrix: Water
Date Received: 07/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368009	07/21/17 03:29	JAS	TAL BUF
Total/NA	Prep	200.7			367264	07/18/17 08:25	EMB	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	367661	07/18/17 23:27	LMH	TAL BUF
Total/NA	Prep	1664B			367710	07/19/17 11:38	DSC	TAL BUF
Total/NA	Analysis	1664B		1	367758	07/19/17 11:38	DSC	TAL BUF

Client Sample ID: Treatment Influent
Lab Sample ID: 480-121119-2
Date Collected: 07/13/17 10:15
Matrix: Water
Date Received: 07/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	451912	07/26/17 15:23	AAT	TAL EDI

Client Sample ID: Treatment Trip Blank
Lab Sample ID: 480-121119-3
Date Collected: 07/13/17 00:00
Matrix: Water
Date Received: 07/14/17 09:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	368009	07/21/17 04:19	JAS	TAL BUF

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Laboratory: TestAmerica Buffalo

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10026	03-31-18

Laboratory: TestAmerica Edison

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11452	04-01-18

Method Summary

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF
8260C SIM	Volatile Organic Compounds (GC/MS)	SW846	TAL EDI
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
1664B	HEM and SGT-HEM	1664B	TAL BUF

Protocol References:

1664B = 1664B

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUF = TestAmerica Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Sample Summary

Client: New York State D.E.C.
Project/Site: Frewsburg Site #907016

TestAmerica Job ID: 480-121119-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-121119-1	Treatment Effluent	Water	07/13/17 10:00	07/14/17 09:45
480-121119-2	Treatment Influent	Water	07/13/17 10:15	07/14/17 09:45
480-121119-3	Treatment Trip Blank	Water	07/13/17 00:00	07/14/17 09:45

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

480-121119 COC

Client Information	Sampler: MH	Lab PM: Johnson, Orlette S	Carri
Client Contact: Thomas Palmer	Phone:	E-Mail: orlette.johnson@testamericainc.com	
Company: Groundwater & Environmental Services Inc			
Address: 495 Aero Drive Suite 3	Due Date Requested:		
City: Cheektowaga	TAT Requested (days): STD		
State, Zip: NY, 14225			
Phone:	PO #: CallOut ID 126536		
Email: tpalmer@gesonline.com	WO #:		
Project Name: Frewsburg Site#907016	Project #: 48013647		
Site:	SSOW#:		

COC No:	Page:	Job #:
480-98953-19840.1	Page 1 of 1	121119

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.7 - Total Al, Fe, Zn	1664A_Calc - Oil & Grease	8260C - TCL VOCs OLM04.2 list	8260 SIM 1,4 Dioxane	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	S	A			
Treatment Effluent	7/13/17	1000	G	Water	N	N	/	/	/			
Treatment Influent	7/13/17	1015	G	water	N	N				/		
Treatment Trip blank	7/13/17		G	water					(1)			RAK 7/14/17

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☑ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: MH	Date/Time: 7/14/17 0945	Company: GES	Received by:		Date/Time: 7/14/17 0945	Company: TA BUFFALO	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	
Relinquished by:	Date/Time:	Company	Received by:		Date/Time:	Company	

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.4°C #4

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-121119-1

Login Number: 121119
List Number: 1
Creator: Kinecki, Kenneth P

List Source: TestAmerica Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	GES
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-121119-1

Login Number: 121119
List Number: 2
Creator: Armbruster, Chris

List Source: TestAmerica Edison
List Creation: 07/26/17 11:01 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	034151
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	3.0°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	