

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Buffalo

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Tel: (716)691-2600

TestAmerica Job ID: 480-114856-1

Client Project/Site: Frewsburg Site #907016

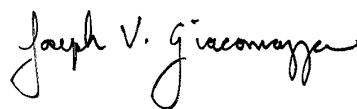
For:

New York State D.E.C.

270 Michigan Avenue

Buffalo, New York 14203

Attn: Mr. Maurice Moore



Authorized for release by:

3/30/2017 9:40:40 AM

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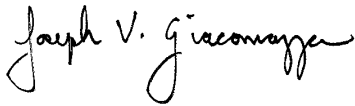
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Results relate only to the items tested and the sample(s) as received by the laboratory.

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.



Joe Giacomazza
Project Management Assistant II
3/30/2017 9:40:41 AM

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Definitions/Glossary

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

TestAmerica Job ID: 480-114856-1

Qualifiers

GC/MS VOA

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

Metals

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

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 480-114856-1

Job ID: 480-114856-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-114856-1

Receipt

The samples were received on 3/21/2017 3:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4° C.

GC/MS VOA

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-348337 recovered above the upper control limit for Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: TREATMENT EFFLUENT (480-114856-1) and TREATMENT TRIP BLANK (480-114856-3).

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: 480-114856-1

Client Sample ID: TREATMENT EFFLUENT

Lab Sample ID: 480-114856-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.0	J	10	3.0	ug/L	1		8260C	Total/NA
Iron	1.9	B	0.050	0.019	mg/L	1		200.7 Rev 4.4	Total/NA
Zinc	0.013		0.010	0.0015	mg/L	1		200.7 Rev 4.4	Total/NA

Client Sample ID: TREATMENT INFLUENT

Lab Sample ID: 480-114856-2

No Detections.

Client Sample ID: TREATMENT TRIP BLANK

Lab Sample ID: 480-114856-3

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-114856-1

Client Sample ID: TREATMENT EFFLUENT

Lab Sample ID: 480-114856-1

Date Collected: 03/20/17 10:45

Matrix: Water

Date Received: 03/21/17 15:30

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			03/22/17 01:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/22/17 01:11	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/22/17 01:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/22/17 01:11	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/22/17 01:11	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/22/17 01:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/22/17 01:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/22/17 01:11	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/22/17 01:11	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/22/17 01:11	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/22/17 01:11	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/22/17 01:11	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/22/17 01:11	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/22/17 01:11	1
2-Hexanone	ND		5.0	1.2	ug/L			03/22/17 01:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/22/17 01:11	1
Acetone	3.0	J	10	3.0	ug/L			03/22/17 01:11	1
Benzene	ND		1.0	0.41	ug/L			03/22/17 01:11	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/22/17 01:11	1
Bromoform	ND		1.0	0.26	ug/L			03/22/17 01:11	1
Bromomethane	ND		1.0	0.69	ug/L			03/22/17 01:11	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/22/17 01:11	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/22/17 01:11	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/22/17 01:11	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/22/17 01:11	1
Chloroethane	ND		1.0	0.32	ug/L			03/22/17 01:11	1
Chloroform	ND		1.0	0.34	ug/L			03/22/17 01:11	1
Chloromethane	ND		1.0	0.35	ug/L			03/22/17 01:11	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/22/17 01:11	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/22/17 01:11	1
Cyclohexane	ND		1.0	0.18	ug/L			03/22/17 01:11	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/22/17 01:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/22/17 01:11	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/22/17 01:11	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/22/17 01:11	1
Methyl acetate	ND		2.5	1.3	ug/L			03/22/17 01:11	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/22/17 01:11	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/22/17 01:11	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/22/17 01:11	1
Styrene	ND		1.0	0.73	ug/L			03/22/17 01:11	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/22/17 01:11	1
Toluene	ND		1.0	0.51	ug/L			03/22/17 01:11	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/22/17 01:11	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/22/17 01:11	1
Trichloroethene	ND		1.0	0.46	ug/L			03/22/17 01:11	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/22/17 01:11	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/22/17 01:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/22/17 01:11	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-114856-1

Client Sample ID: TREATMENT EFFLUENT

Lab Sample ID: 480-114856-1

Date Collected: 03/20/17 10:45

Matrix: Water

Date Received: 03/21/17 15:30

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 120		03/22/17 01:11	1
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		03/22/17 01:11	1
4-Bromofluorobenzene (Surr)	83		73 - 120		03/22/17 01:11	1
Dibromofluoromethane (Surr)	94		75 - 123		03/22/17 01:11	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		03/23/17 09:03	03/23/17 21:36	1
Iron	1.9	B	0.050	0.019	mg/L		03/23/17 09:03	03/23/17 21:36	1
Zinc	0.013		0.010	0.0015	mg/L		03/23/17 09:03	03/23/17 21:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	ND		5.0	1.4	mg/L		03/22/17 17:44	03/22/17 17:44	1

Client Sample Results

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

TestAmerica Job ID: 480-114856-1

Client Sample ID: TREATMENT INFLUENT

Lab Sample ID: 480-114856-2

Date Collected: 03/20/17 11:00

Matrix: Water

Date Received: 03/21/17 15:30

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			03/27/17 02:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		71 - 144					03/27/17 02:01	1
4-Bromofluorobenzene	102		72 - 133					03/27/17 02:01	1

Client Sample Results

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

TestAmerica Job ID: 480-114856-1

Client Sample ID: TREATMENT TRIP BLANK

Lab Sample ID: 480-114856-3

Date Collected: 03/20/17 00:00

Matrix: Water

Date Received: 03/21/17 15:30

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			03/22/17 01:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/22/17 01:39	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/22/17 01:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/22/17 01:39	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/22/17 01:39	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/22/17 01:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/22/17 01:39	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/22/17 01:39	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/22/17 01:39	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/22/17 01:39	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/22/17 01:39	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/22/17 01:39	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/22/17 01:39	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/22/17 01:39	1
2-Hexanone	ND		5.0	1.2	ug/L			03/22/17 01:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/22/17 01:39	1
Acetone	ND		10	3.0	ug/L			03/22/17 01:39	1
Benzene	ND		1.0	0.41	ug/L			03/22/17 01:39	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/22/17 01:39	1
Bromoform	ND		1.0	0.26	ug/L			03/22/17 01:39	1
Bromomethane	ND		1.0	0.69	ug/L			03/22/17 01:39	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/22/17 01:39	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/22/17 01:39	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/22/17 01:39	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/22/17 01:39	1
Chloroethane	ND		1.0	0.32	ug/L			03/22/17 01:39	1
Chloroform	ND		1.0	0.34	ug/L			03/22/17 01:39	1
Chloromethane	ND		1.0	0.35	ug/L			03/22/17 01:39	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/22/17 01:39	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/22/17 01:39	1
Cyclohexane	ND		1.0	0.18	ug/L			03/22/17 01:39	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/22/17 01:39	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/22/17 01:39	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/22/17 01:39	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/22/17 01:39	1
Methyl acetate	ND		2.5	1.3	ug/L			03/22/17 01:39	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/22/17 01:39	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/22/17 01:39	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/22/17 01:39	1
Styrene	ND		1.0	0.73	ug/L			03/22/17 01:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/22/17 01:39	1
Toluene	ND		1.0	0.51	ug/L			03/22/17 01:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/22/17 01:39	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/22/17 01:39	1
Trichloroethene	ND		1.0	0.46	ug/L			03/22/17 01:39	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/22/17 01:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/22/17 01:39	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/22/17 01:39	1

TestAmerica Buffalo

Client Sample Results

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

TestAmerica Job ID: 480-114856-1

Client Sample ID: TREATMENT TRIP BLANK

Lab Sample ID: 480-114856-3

Date Collected: 03/20/17 00:00

Matrix: Water

Date Received: 03/21/17 15:30

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	100		80 - 120		03/22/17 01:39	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	107		77 - 120		03/22/17 01:39	1
<i>4-Bromofluorobenzene (Surr)</i>	84		73 - 120		03/22/17 01:39	1
<i>Dibromofluoromethane (Surr)</i>	96		75 - 123		03/22/17 01:39	1

Surrogate Summary

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

TestAmerica Job ID: 480-114856-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (80-120)	12DCE (77-120)	BFB (73-120)	DBFM (75-123)
480-114856-1	TREATMENT EFFLUENT	100	104	83	94
480-114856-3	TREATMENT TRIP BLANK	100	107	84	96
LCS 480-348337/5	Lab Control Sample	101	101	87	96
MB 480-348337/9	Method Blank	102	104	85	94

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

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		12DCE (71-144)	BFB (72-133)
480-114856-2	TREATMENT INFLUENT	101	102
LCS 460-426358/3	Lab Control Sample	101	99
LCSD 460-426358/4	Lab Control Sample Dup	102	98
MB 460-426358/7	Method Blank	108	103

Surrogate Legend

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

QC Sample Results

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

TestAmerica Job ID: 480-114856-1

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

Lab Sample ID: MB 480-348337/9

Matrix: Water

Analysis Batch: 348337

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			03/21/17 19:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			03/21/17 19:43	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			03/21/17 19:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			03/21/17 19:43	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			03/21/17 19:43	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			03/21/17 19:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			03/21/17 19:43	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			03/21/17 19:43	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			03/21/17 19:43	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			03/21/17 19:43	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			03/21/17 19:43	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			03/21/17 19:43	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			03/21/17 19:43	1
2-Butanone (MEK)	ND		10	1.3	ug/L			03/21/17 19:43	1
2-Hexanone	ND		5.0	1.2	ug/L			03/21/17 19:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			03/21/17 19:43	1
Acetone	ND		10	3.0	ug/L			03/21/17 19:43	1
Benzene	ND		1.0	0.41	ug/L			03/21/17 19:43	1
Bromodichloromethane	ND		1.0	0.39	ug/L			03/21/17 19:43	1
Bromoform	ND		1.0	0.26	ug/L			03/21/17 19:43	1
Bromomethane	ND		1.0	0.69	ug/L			03/21/17 19:43	1
Carbon disulfide	ND		1.0	0.19	ug/L			03/21/17 19:43	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			03/21/17 19:43	1
Chlorobenzene	ND		1.0	0.75	ug/L			03/21/17 19:43	1
Dibromochloromethane	ND		1.0	0.32	ug/L			03/21/17 19:43	1
Chloroethane	ND		1.0	0.32	ug/L			03/21/17 19:43	1
Chloroform	ND		1.0	0.34	ug/L			03/21/17 19:43	1
Chloromethane	ND		1.0	0.35	ug/L			03/21/17 19:43	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			03/21/17 19:43	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			03/21/17 19:43	1
Cyclohexane	ND		1.0	0.18	ug/L			03/21/17 19:43	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			03/21/17 19:43	1
Ethylbenzene	ND		1.0	0.74	ug/L			03/21/17 19:43	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			03/21/17 19:43	1
Isopropylbenzene	ND		1.0	0.79	ug/L			03/21/17 19:43	1
Methyl acetate	ND		2.5	1.3	ug/L			03/21/17 19:43	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			03/21/17 19:43	1
Methylcyclohexane	ND		1.0	0.16	ug/L			03/21/17 19:43	1
Methylene Chloride	ND		1.0	0.44	ug/L			03/21/17 19:43	1
Styrene	ND		1.0	0.73	ug/L			03/21/17 19:43	1
Tetrachloroethene	ND		1.0	0.36	ug/L			03/21/17 19:43	1
Toluene	ND		1.0	0.51	ug/L			03/21/17 19:43	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			03/21/17 19:43	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			03/21/17 19:43	1
Trichloroethene	ND		1.0	0.46	ug/L			03/21/17 19:43	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			03/21/17 19:43	1
Vinyl chloride	ND		1.0	0.90	ug/L			03/21/17 19:43	1
Xylenes, Total	ND		2.0	0.66	ug/L			03/21/17 19:43	1

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-114856-1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 120		03/21/17 19:43	1
1,2-Dichloroethane-d4 (Surr)	104		77 - 120		03/21/17 19:43	1
4-Bromofluorobenzene (Surr)	85		73 - 120		03/21/17 19:43	1
Dibromofluoromethane (Surr)	94		75 - 123		03/21/17 19:43	1

Lab Sample ID: LCS 480-348337/5

Matrix: Water

Analysis Batch: 348337

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	24.7		ug/L		99	73 - 126
1,1,2,2-Tetrachloroethane	25.0	26.9		ug/L		108	76 - 120
1,1,2-Trichloroethane	25.0	25.8		ug/L		103	76 - 122
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	29.1		ug/L		117	61 - 148
1,1-Dichloroethane	25.0	27.1		ug/L		108	77 - 120
1,1-Dichloroethene	25.0	24.5		ug/L		98	66 - 127
1,2,4-Trichlorobenzene	25.0	21.7		ug/L		87	79 - 122
1,2-Dibromo-3-Chloropropane	25.0	25.2		ug/L		101	56 - 134
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	80 - 124
1,2-Dichloroethane	25.0	25.2		ug/L		101	75 - 120
1,2-Dichloropropane	25.0	26.9		ug/L		107	76 - 120
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	77 - 120
1,4-Dichlorobenzene	25.0	25.8		ug/L		103	80 - 120
2-Butanone (MEK)	125	117		ug/L		94	57 - 140
2-Hexanone	125	125		ug/L		100	65 - 127
4-Methyl-2-pentanone (MIBK)	125	135		ug/L		108	71 - 125
Acetone	125	103		ug/L		82	56 - 142
Benzene	25.0	24.8		ug/L		99	71 - 124
Bromodichloromethane	25.0	25.0		ug/L		100	80 - 122
Bromoform	25.0	20.7		ug/L		83	61 - 132
Bromomethane	25.0	22.7		ug/L		91	55 - 144
Carbon disulfide	25.0	24.0		ug/L		96	59 - 134
Carbon tetrachloride	25.0	23.6		ug/L		94	72 - 134
Chlorobenzene	25.0	25.4		ug/L		102	80 - 120
Dibromochloromethane	25.0	24.7		ug/L		99	75 - 125
Chloroethane	25.0	27.1		ug/L		108	69 - 136
Chloroform	25.0	24.5		ug/L		98	73 - 127
Chloromethane	25.0	25.9		ug/L		104	68 - 124
cis-1,2-Dichloroethene	25.0	23.7		ug/L		95	74 - 124
cis-1,3-Dichloropropene	25.0	24.3		ug/L		97	74 - 124
Cyclohexane	25.0	28.2		ug/L		113	59 - 135
Dichlorodifluoromethane	25.0	32.0		ug/L		128	59 - 135
Ethylbenzene	25.0	25.1		ug/L		100	77 - 123
1,2-Dibromoethane	25.0	26.6		ug/L		106	77 - 120
Isopropylbenzene	25.0	28.6		ug/L		115	77 - 122
Methyl acetate	125	116		ug/L		93	74 - 133
Methyl tert-butyl ether	25.0	23.7		ug/L		95	77 - 120
Methylcyclohexane	25.0	26.5		ug/L		106	68 - 134
Methylene Chloride	25.0	22.6		ug/L		90	75 - 124
Styrene	25.0	26.2		ug/L		105	80 - 120
Tetrachloroethene	25.0	22.1		ug/L		88	74 - 122
Toluene	25.0	25.9		ug/L		104	80 - 122
trans-1,2-Dichloroethene	25.0	23.6		ug/L		94	73 - 127

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-114856-1

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

Lab Sample ID: LCS 480-348337/5

Matrix: Water

Analysis Batch: 348337

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	26.1		ug/L		104	80 - 120
Trichloroethene	25.0	24.4		ug/L		97	74 - 123
Trichlorofluoromethane	25.0	30.3		ug/L		121	62 - 150
Vinyl chloride	25.0	28.3		ug/L		113	65 - 133

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 120
1,2-Dichloroethane-d4 (Surr)	101		77 - 120
4-Bromofluorobenzene (Surr)	87		73 - 120
Dibromofluoromethane (Surr)	96		75 - 123

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

Lab Sample ID: MB 460-426358/7

Matrix: Water

Analysis Batch: 426358

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			03/26/17 21:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		71 - 144		03/26/17 21:53	1
4-Bromofluorobenzene	103		72 - 133		03/26/17 21:53	1

Lab Sample ID: LCS 460-426358/3

Matrix: Water

Analysis Batch: 426358

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	4.68		ug/L		94	66 - 135

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	101		71 - 144
4-Bromofluorobenzene	99		72 - 133

Lab Sample ID: LCSD 460-426358/4

Matrix: Water

Analysis Batch: 426358

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	4.83		ug/L		97	66 - 135	3	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	102		71 - 144
4-Bromofluorobenzene	98		72 - 133

TestAmerica Buffalo

QC Sample Results

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

TestAmerica Job ID: 480-114856-1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-348548/1-A

Matrix: Water

Analysis Batch: 348704

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 348548

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	ND		0.20	0.060	mg/L		03/23/17 09:03	03/23/17 20:49	1
Iron	0.0324	J	0.050	0.019	mg/L		03/23/17 09:03	03/23/17 20:49	1
Zinc	ND		0.010	0.0015	mg/L		03/23/17 09:03	03/23/17 20:49	1

Lab Sample ID: LCS 480-348548/2-A

Matrix: Water

Analysis Batch: 348704

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 348548

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	10.0	9.82		mg/L		98	85 - 115
Iron	10.0	9.77		mg/L		98	85 - 115
Zinc	0.200	0.205		mg/L		103	85 - 115

Method: 1664A - HEM and SGT-HEM

Lab Sample ID: MB 480-348512/1-A

Matrix: Water

Analysis Batch: 348524

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 348512

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Oil & Grease	ND		5.0	1.4	mg/L		03/22/17 17:44	03/22/17 17:44	1

Lab Sample ID: LCS 480-348512/2-A

Matrix: Water

Analysis Batch: 348524

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 348512

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Oil & Grease	39.9	37.82		mg/L		95	78 - 114

QC Association Summary

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

TestAmerica Job ID: 480-114856-1

GC/MS VOA

Analysis Batch: 348337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-114856-1	TREATMENT EFFLUENT	Total/NA	Water	8260C	
480-114856-3	TREATMENT TRIP BLANK	Total/NA	Water	8260C	
MB 480-348337/9	Method Blank	Total/NA	Water	8260C	
LCS 480-348337/5	Lab Control Sample	Total/NA	Water	8260C	

Analysis Batch: 426358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-114856-2	TREATMENT INFLUENT	Total/NA	Water	8260C SIM	
MB 460-426358/7	Method Blank	Total/NA	Water	8260C SIM	
LCS 460-426358/3	Lab Control Sample	Total/NA	Water	8260C SIM	
LCSD 460-426358/4	Lab Control Sample Dup	Total/NA	Water	8260C SIM	

Metals

Prep Batch: 348548

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-114856-1	TREATMENT EFFLUENT	Total/NA	Water	200.7	
MB 480-348548/1-A	Method Blank	Total/NA	Water	200.7	
LCS 480-348548/2-A	Lab Control Sample	Total/NA	Water	200.7	

Analysis Batch: 348704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-114856-1	TREATMENT EFFLUENT	Total/NA	Water	200.7 Rev 4.4	348548
MB 480-348548/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	348548
LCS 480-348548/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	348548

General Chemistry

Prep Batch: 348512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-114856-1	TREATMENT EFFLUENT	Total/NA	Water	1664A	
MB 480-348512/1-A	Method Blank	Total/NA	Water	1664A	
LCS 480-348512/2-A	Lab Control Sample	Total/NA	Water	1664A	

Analysis Batch: 348524

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-114856-1	TREATMENT EFFLUENT	Total/NA	Water	1664A	348512
MB 480-348512/1-A	Method Blank	Total/NA	Water	1664A	348512
LCS 480-348512/2-A	Lab Control Sample	Total/NA	Water	1664A	348512

Lab Chronicle

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

TestAmerica Job ID: 480-114856-1

Client Sample ID: TREATMENT EFFLUENT

Date Collected: 03/20/17 10:45

Date Received: 03/21/17 15:30

Lab Sample ID: 480-114856-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	348337	03/22/17 01:11	NEA	TAL BUF
Total/NA	Prep	200.7			348548	03/23/17 09:03	MVZ	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	348704	03/23/17 21:36	SLB	TAL BUF
Total/NA	Prep	1664A			348512	03/22/17 17:44	DSC	TAL BUF
Total/NA	Analysis	1664A		1	348524	03/22/17 17:44	DSC	TAL BUF

Client Sample ID: TREATMENT INFLUENT

Date Collected: 03/20/17 11:00

Date Received: 03/21/17 15:30

Lab Sample ID: 480-114856-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C SIM		1	426358	03/27/17 02:01	AAT	TAL EDI

Client Sample ID: TREATMENT TRIP BLANK

Date Collected: 03/20/17 00:00

Date Received: 03/21/17 15:30

Lab Sample ID: 480-114856-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	348337	03/22/17 01:39	NEA	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

Certification Summary

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

TestAmerica Job ID: 480-114856-1

Laboratory: TestAmerica Buffalo

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-17 *

Laboratory: TestAmerica Edison

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Connecticut	State Program	1	PH-0200	09-30-18
DE Haz. Subst. Cleanup Act (HSCA)	State Program	3	N/A	12-31-17
New Jersey	NELAP	2	12028	06-30-17
New York	NELAP	2	11452	03-31-17
Pennsylvania	NELAP	3	68-00522	02-28-18
Rhode Island	State Program	1	LAO00132	12-30-17
USDA	Federal		NJCA-003-08	04-04-17

* Certification renewal pending - certification considered valid.

TestAmerica Buffalo

Method Summary

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

TestAmerica Job ID: 480-114856-1

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
1664A	HEM and SGT-HEM	1664A	TAL BUF

Protocol References:

1664A = EPA-821-98-002

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: 480-114856-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-114856-1	TREATMENT EFFLUENT	Water	03/20/17 10:45	03/21/17 15:30
480-114856-2	TREATMENT INFLUENT	Water	03/20/17 11:00	03/21/17 15:30
480-114856-3	TREATMENT TRIP BLANK	Water	03/20/17 00:00	03/21/17 15:30

Chain of Custody Record

Client Information Client Contact: Thomas Palmer Company: Groundwater & Environmental Services Inc Address: 495 Aero Drive Suite 3 City: Cheektowaga State, Zip: NY, 14225 Phone: [blank] Email: tpalmer@gesonline.com Project Name: Frewsburg Site#907016 Site: [blank]		Sampler: T. Palmer Lab PM: Johnson, Oriette S Phone: 716-866-3590 E-Mail: oriette.johnson@testamericainc.com		Carrier Tracking No(s): [blank] COC No: 480-89520-19840.1 Page: Page 1 of 1 Job #: [blank]						
Due Date Requested: [blank] TAT Requested (days): STD PO #: [blank] CallOut ID 126536 WO #: [blank] Project #: 48013647 SSOW#: [blank]		Analysis Requested 1664A Calc - Oil & Grease 8260C - TCL VOCs OLM04.2 list 8260 SIM 200.7 - Total Al, Fe, Zn Perform MS/MSD (Yes or No)								
Sample Identification Treatment Effluent Treated Influent Treatment Trip Blank		Sample Date 3-20-17 3-20-17	Sample Time 1045 1100	Sample Type (C=comp, G=grab) G C	Matrix (W=water, S=solid, O=wastewater, BT=tissue, A=air) Water WWS WWS	Preservation Code: [blank]	Field Filtered Sample (Yes or No) [blank]	D S A A	Total Number of Containers [blank]	Special Instructions/Note: [blank]
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: [Signature] Relinquished Date: 3-20-17 / 1815 Relinquished Time: 3-21-17 / 1740 Relinquished by: [Signature] Relinquished Date: 3-21-17 / 1530 Relinquished Time: 3-21-17 / 1530		Method of Shipment: [blank] Received by: [Signature] Received Date: 3-21-17 / 1430 Received Time: 3-21-17 / 1530 Cooler Temperature(s) °C and Other Remarks: 3.4								
Custody Seals Intact: ☐ Yes ☐ No Custody Seal No.: [blank]		Company: [blank]								

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-114856-1

Login Number: 114856

List Source: TestAmerica Buffalo

List Number: 1

Creator: Janish, Carl M

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: 480-114856-1

Login Number: 114856

List Number: 2

Creator: Armbruster, Chris

List Source: TestAmerica Edison

List Creation: 03/23/17 10:20 AM

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	858778
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	4.8°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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	