Woman Owned Business
Aztech Environmental
TECHNOLOGIES
5 McCrea Hill Road • Ballston Spa, New York 12020

January 25, 2016

Mr. Gary Priscott
NYSDEC Region 7
1679 Route 11
Kirkwood, New York 12885

Re: Annual Groundwater Monitoring Report
Former Ithaca Gun Factory - Offsite
121 – 125 Lake Street, Ithaca, Tompkins County, New York
NYSDEC Site Number C755019A

Dear Mr. Priscott:

Aztech Environmental Technologies (Aztech) has prepared the following correspondence that summarizes the annual 2015 groundwater sampling event performed at the above referenced site September 30, 2015 through October 2, 2015. Concentration and distribution of the site-related contaminant of concern (i.e., trichloroethene) appear to be consistent with the previous monitoring events conducted in November 2013 and June 2014.

If you have any questions regarding the information contained herein, please contact Aztech at (518) 885-5383.

Sincerely,

Karen J. Carling
Environmental Scientist

Enclosure

Cc: File

REPORT DATE: **January 25, 2016**

REPORT NAME: **Annual Groundwater Monitoring Report**

SUBJECT SITE: **Former Ithaca Gun Factory - Offsite**
121 – 125 Lake Street, Ithaca, Tompkins County, New York
NYSDEC Site Number C755019A

SITE PHASE: **Groundwater Monitoring and Sampling**

SITE DESCRIPTION

The site was the location of the former Ithaca Gun Factory and was in operation from approximately 1883 to 1987. Fall Creek is located directly to the north and adjacent to the former site structures. The creek was utilized as a major source of energy at the site. The site property has since been abandoned and the majority of the former site structures have been demolished and removed. Only the historic smokestack remains partially intact on the property. As a result of the factory's years of operation, the site became known as a major source of environmental pollution which included lead and solvents. An extensive superfund remediation effort has been conducted at the site by the New York State Department of Environmental Conservation (NYSDEC) and others. As of 2013, remediation efforts onsite were still being conducted. In July 2013 the NYSDEC contracted Aztech to conduct a subsurface investigation and characterization of offsite properties located topographically downgradient from the site. Details of the offsite work conducted by Aztech are documented in the Site Characterization Report, February 2014.

DESCRIPTION OF FIELD WORK

- <u>September 30, 2015 through October 2, 2015:</u> Annual groundwater gauging and sampling at ten (10) monitoring wells.

PROCEDURES

- Depth to groundwater measurements were collected on September 30, 2015 using an electronic water level meter graduated in 0.01 foot intervals. Depth to groundwater measurements were taken from the top of monitoring well casings.
- Each sampled monitoring well was purged using low flow sampling techniques which included dedicated sample tubing and a peristaltic pump. Groundwater field parameters including turbidity, dissolved oxygen, pH, temperature, conductivity and oxidation reduction

potential were monitored with a Horiba U-52 equipped with a flow through cell. All groundwater field parameters were allowed to stabilize prior to sample collection.

- Groundwater samples were preserved with dilute hydrochloric acid, placed on ice in a cooler, and transported under proper chain of custody to the laboratory.
- The groundwater samples were analyzed within the applicable holding times for the NYSDEC full list of volatile organic compounds (VOCs) and ethanol using United States Environmental Protection Agency (USEPA) Method 8260C.

ANALYTICAL LABORATORY

TestAmerica – 10 Hazelwood Drive, Amherst, New York 14228
New York Certification Number ELAP NY200003

The laboratory analysis report is attached.

RESULTS

- Monitoring wells AZMW-1, AZMW-2, AZMW-3, AZMW-4, AZMW-5, AZMW-6, AZMW-7, AZMW-8, MW-6, and MW-7 were gauged on September 30, 2015. All groundwater elevation data is presented on **Table 1**. The groundwater flow direction on this date was generally to the west (**Figure 1**).
- The results of the groundwater sampling event are shown on **Table 2**. The groundwater VOC distribution is shown as **Figure 2**.
- Trichloroethene (TCE) was the only site-related primary contaminant of concern detected in the groundwater samples collected. TCE was detected in monitoring wells AZMW-3, AZMW-4, AZMW-6, AZMW-7, and MW-7. Concentrations of TCE ranged from 1.3 micrograms per liter (µg/l) to 3.2 µg/l and were below the applicable groundwater standards, criteria and guidance values (SCGs)[1] for TCE of 5.0 µg/l in all wells sampled.
- Bromodichloromethane (BDCM) was detected at an estimated value[2] of 0.43 µg/l in the sample collected from AZMW-3. The SCG for BDCM in groundwater is 50 µg/l.
- Chloroform was detected in monitoring wells AZMW-1, AZMW-3, AZMW-4, AZMW-5, AZMW-6, AZMW-7, AZMW-8, and MW-7. Concentrations of chloroform were below the groundwater SCG of 7.0 µg/l in all wells with the exception of the AZMW-8 which had a chloroform detection of 18 µg/l.

[1] SCGs for groundwater – Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 fo the New York State Sanitary Code (10 NYCRR Part 5).
[2] An estimated value indicates that the laboratory result is less than the reporting limit, but greater than the method detection limit, and that the concentration reported is an approximate value.

- Chloromethane was detected at estimated values of 0.38 µg/l and 0.76 µg/l in samples collected from AZMW-5 and AZMW-1, respectively. The SCG for chloromethane in groundwater is 5.0 µg/l.

- No VOC constituents were detected in monitoring wells AZMW-2 and MW-6.

Data Usability Summary Report (DUSR)

ZData Reports validation service of Syracuse, New York validated the analytical data package submitted to Aztech by TestAmerica. Analytical data packages are submitted as sample delivery groups (SDGs) based on the number of samples within each shipment received at the laboratory for analysis. The SDG associated with this groundwater sampling event was reviewed for completeness and compliance as defined by the requirements for NYSDEC Analytical Services Protocol Category B deliverables.

Data validation was completed for ten (10) groundwater samples and three (3) quality assurance/quality control samples. USEPA Method 8260C volatile organic analyses data were determined to be usable for qualitative and quantitative purposes. Further, the completeness of the data was determined to be 100 percent. Refer to the attached DUSR report for further details.

SUMMARY & CONCLUSION

- The groundwater flow direction beneath the site was generally to the west on October 30, 2015.

- TCE was detected in five (5) monitoring wells and was below the SCG in all wells sampled on October 1 and 2, 2015. The concentrations and distribution of TCE are consistent with the previous groundwater monitoring event conducted in November 2013 and June 2014.

- The other VOCs detected in groundwater (i.e., BDCM, chloroform, and chloromethane) are not related to the Former Ithaca Gun Factory site.

- Presence of BDCM, chloroform, and chloromethane at low concentrations in groundwater in this urban area is most likely related to intentional or unintentional discharges of chlorinated drinking water from the municipal drinking water supply system (ATSDR, 1998; Ivahnenko and Zogorski, 2006). These chemical constituents are disinfection by-products that are formed when chlorine is added to water. Chlorine is added to drinking water to destroy bacteria.

REFERENCES

Agency for Toxic Substances and Disease Registry, 1998, Public Health Statement, Chloromethane, CAS#: 74-87-3, Division of Toxicology, 7 p.

Ivahnenko, Tamara, and Zogorski, J.S., 2006, Sources and occurrence of chloroform and other trihalomethanes in drinking-water supply wells in the United States, 1986-2001: U.S. Geological Survey Scientific Investigations Report 2006-5015, 13 p.

ATTACHMENTS

Figures
Tables
Laboratory Analytical Reports
DUSR Report

Figures

FALL CREEK

EAST FALLS STREET

AZMW-8
383.52

AZMW-7
383.95

MW-6
394.90

PARK/NATURAL AREA

NORTH TIOGA STREET

AZMW-3
383.50

EAST LINCOLN STREET

AZMW-4
383.52

384.00
385.00
386.00
387.00
388.00
389.00
390.00
391.00
392.00
393.00
394.00

MW-7
394.57

LOCATION OF FORMER
ITHACA GUN FACTORY

LAKE STREET

AZMW-6
383.13

AZMW-5
383.19

LINN STREET

QUEEN STREET

NORTH AURORA STREET

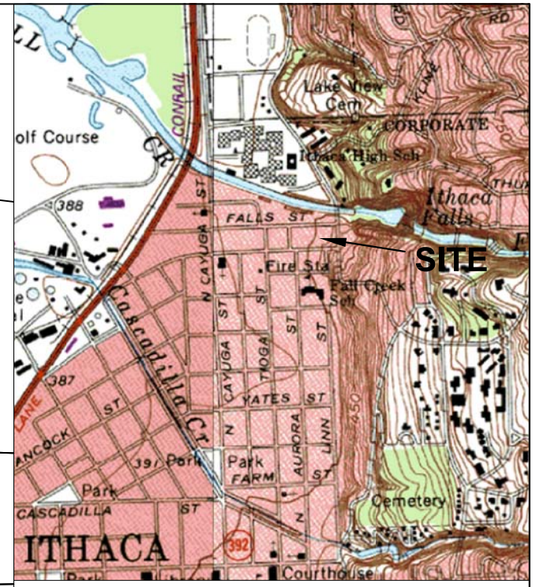
383.00

AZMW-1
383.40

AZMW-2
382.88

MW-

N
W
E
S



LEGEND

MW-7	Monitoring Well
	Calculated Isopleth
	Inferred Isopleth
394.90	Water Table Elevation (MSL)
	Generalized Direction of Groundwater Flow

Former Ithaca Gun Factory - Offsite

NYSDEC Site #C755019A
Ithaca, New York

Figure 1

DATE: October 2015 | Scale 1" = 100'

GROUNDWATER COUNTOUR MAP

Aztech Environmental
TECHNOLOGIES
Woman Owned Business
5 McCrea Hill Road, Ballston Spa, NY 12020
518.885-5383 | aztechenv.com

Former Ithaca Gun Factory - Offsite

NYSDEC Site #C755019A
Ithaca, New York

Figure 2

DATE: October 2015 | Scale 1" = 100'

GROUNDWATER VOC DISTRIBUTION MAP

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Tables

TABLE 1

GROUNDWATER ELEVATIONS

Former Ithaca Gun Factory - (Offsite)

Ithaca, New York

DEC Site No. C755019A

MONITORING WELL DESIGNATION		AZMW-1	AZMW-2	AZMW-3	AZMW-4	AZMW-5	AZMW-6	AZMW-7	AZMW-8	MW-6	MW-7
TOP OF CASING		408.29	394.38	395.28	402.32	406.06	396.63	403.95	398.08	423.69	432.38
Date		**GROUNDWATER ELEVATIONS**									
11/4/2013	DTW	25.15	11.81	12.18	19.21	23.30	13.91	20.58	15.01	30.69	37.91
	GW Elev	383.14	382.57	383.10	383.11	382.76	382.72	383.37	383.07	393.00	394.47
6/19/2014	DTW	24.27	11.00	11.39	18.35	22.43	13.07	19.42	14.13	28.86	37.87
	GW Elev	384.02	383.38	383.89	383.97	383.63	383.56	384.53	383.95	394.83	394.51
9/30/2015	DTW	24.89	11.50	11.78	18.80	22.87	13.50	20.00	14.56	28.79	37.81
	GW Elev	383.40	382.88	383.50	383.52	383.19	383.13	383.95	383.52	394.90	394.57

Notes:

GW Elev = Groundwater Elevation (ft.)

DTW = Depth to water (ft.)

TOC data from T. G. Miller survey conducted 10/24/2013

TABLE 2
LABORATORY GROUNDWATER ANALYTICAL RESULTS
Volatile Organic Compounds

Former Ithaca Gun Factory - (Offsite)
Ithaca, New York
DEC Site No. C755019A
October 1 and 2, 2015

Well ID	Date Sampled	Compound List - 8260 Full List																																																
		1,1,1-Trichloroethane	1,1,2,2-Tetrachloroethane	1,1,2-Trichloroethane	1,1,2-Trichloro-1,2,2-trifluoroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2,4-Trichlorobenzene	1,2-Dibromo-3-Chloropropane	1,2-Dibromoethane	1,2-Dichlorobenzene	1,2-Dichloroethane	1,2-Dichloropropane	1,3-Dichlorobenzene	1,4-Dichlorobenzene	2-Hexanone	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Carbon disulfide	Carbon tetrachloride	Chlorobenzene	Dibromochloromethane	Chloroethane	Chloroform	Chloromethane	cis-1,2-Dichloroethene	cis-1,3-Dichloropropene	Cyclohexane	Dichlorodifluoromethane	Ethylbenzene	Isopropylbenzene	Methyl acetate	MtBE	Methylcyclohexane	Methylene Chloride	Styrene	Tetrachloroethene	Toluene	trans-1,2-Dichloroethene	trans-1,3-Dichloropropene	Trichloroethene	Trichlorofluoromethane	Vinyl chloride	Xylenes, Total	BTEX
	SCGs (µg/L)	5	5	5	5	5	5	10	5	5	4.7	5	5	5	4.7	50	50	50	50	1.0	50	50	5	50	5	5	50	5	7	5	5	5	50	5	5	5	50	10	50	5	5	5	5	5	5	5	5	2	5	-
AZMW-1	11/6/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/19/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/2/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.0	0.76 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AZMW-2	11/5/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/20/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/2/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AZMW-3	11/5/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6	ND	ND	ND	ND
	6/20/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/2/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.43 J	ND	ND	ND	ND	ND	ND	ND	5.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.3	ND	ND	ND	ND
AZMW-4	11/5/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.98 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND
	6/19/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.82 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND
	10/2/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.82 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND
AZMW-5	11/5/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/19/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/1/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	0.38 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
AZMW-6	11/5/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.1	ND	ND	ND	ND
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AZMW-7	11/5/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.82 J	ND	ND	ND	ND
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AZMW-8	11/5/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	6/19/2014	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	10/2/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**18**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-6	11/4/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.30 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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	10/1/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-7	11/4/2013	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	ND	ND	ND	ND
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	10/1/2015	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Nd	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	ND

Notes:

All values are reported in micrograms per liter (µg/L or ppb)

Standards, Criteria, and Guidance Values (SCGs) for groundwater – Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 fo the New York State Sanitary Code (10 NYCRR Part 5).

BOLD values indicate exceedance of applicable NYSDEC guidance values

ND: Not Detected Above Applicable Laboratory Detection Limits

J - Laboratory Qualifier (Result is less than the reporting limit, but greater than the method detection limit and the concentration is an approximate value)

MtBE: methyl tertiary-Butyl Ether

BTEX: benzene, toluene, ethylbenzene, and xylenes

Laboratory Analytical Report

Aztech Environmental

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 480-88435-1
Client Project/Site: Former Ithaca Gun Factory #C755019A

For:
New York State D.E.C.
615 Erie Blvd., West
Syracuse, New York 13204

Attn: Gary Priscott

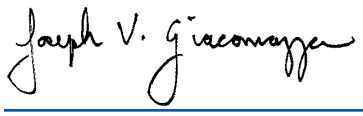
Joseph V. Giacomazza

Authorized for release by:
10/16/2015 12:07:02 PM
Joe Giacomazza, Project Management Assistant II
joe.giacomazza@testamericainc.com

Designee for

Judy Stone, Senior Project Manager
(484)685-0868
judy.stone@testamericainc.com

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
10/16/2015 12:07:02 PM

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Definitions/Glossary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
F2	MS/MSD RPD exceeds control 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, 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)

Job ID: 480-88435-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative
480-88435-1

Receipt
The samples were received on 10/6/2015 1:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.4° C.

Receipt Exceptions
COC and container labels list MS/MSD but do not list a specific sample point. Based on the times listed on COC and labels the MS/MSD were assigned to sample point AZMW-6. The contractor/sampler confirmed this assignment.

GC/MS VOA
Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-268427 recovered outside acceptance criteria, low biased, for several analytes. A reporting limit (RL) standard was analyzed, and the target analytes were detected. Since the associated samples were not detected above the reporting limit for these analytes, the data have been reported. The following samples are impacted: MW-7 (480-88435-1), MW-6 (480-88435-2), AZMW-8 (480-88435-3), AZMW-7 (480-88435-4), AZMW-3 (480-88435-5), AZMW-4 (480-88435-6), AZMW-6 (480-88435-7), AZMW-2 (480-88435-8), AZMW-1 (480-88435-9) and AZMW-5 (480-88435-10).

Method(s) 8260C: The laboratory control sample (LCS) for analytical batch 480-268427 recovered outside control limits for the following analyte: Isopropylbenzene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported. The following samples are impacted: MW-7 (480-88435-1), MW-6 (480-88435-2), AZMW-8 (480-88435-3), AZMW-7 (480-88435-4), AZMW-3 (480-88435-5), AZMW-4 (480-88435-6), AZMW-6 (480-88435-7), AZMW-2 (480-88435-8), AZMW-1 (480-88435-9) and AZMW-5 (480-88435-10).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-268574 recovered above the upper control limit for 1,1,2-Trichloro-1,2,2-trifluoroethane, 1,1-Dichloroethene, Chloromethane, Carbon disulfide and Trichlorofluoromethane. The sample associated with this CCV were not detected above the reporting limit for the affected analytes; therefore, the data have been reported. The following sample is impacted: TRIP BLANK (480-88435-13).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-268574 recovered outside acceptance criteria, low biased, for 4-Methyl-2-pentanone (MIBK). A reporting limit (RL) standard was analyzed, and the target analyte was detected. Since the associated sample was non-detect for this analyte, the data has been reported. The following sample is impacted: TRIP BLANK (480-88435-13).

Method(s) 8260C: The laboratory control sample for analytical batch 480-268574 recovered outside control limits for the following analyte Methyl acetate. Methyl acetate has been identified as a poor performing analyte when analyzed using this method; therefore, re-analysis was not performed. These results have been reported and qualified for the following samples: TRIP BLANK (480-88435-13).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-268649 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 samples are impacted: DUP 1 (480-88435-11) and DUP 2 (480-88435-12).

Method(s) 8260C: The continuing calibration verification (CCV) associated with batch 480-268649 recovered outside acceptance criteria, low biased, for 2-Hexanone, 4-Methyl-2-pentanone, and 2-Butanone. 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: DUP 1 (480-88435-11) and DUP 2 (480-88435-12)

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

Detection Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: MW-7 — Lab Sample ID: 480-88435-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.2		1.0	0.34	ug/L	1		8260C	Total/NA
Trichloroethene	1.6		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 480-88435-2

No Detections.

Client Sample ID: AZMW-8 — Lab Sample ID: 480-88435-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	18		1.0	0.34	ug/L	1		8260C	Total/NA

Client Sample ID: AZMW-7 — Lab Sample ID: 480-88435-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.68	J	1.0	0.34	ug/L	1		8260C	Total/NA
Trichloroethene	1.4		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: AZMW-3 — Lab Sample ID: 480-88435-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bromodichloromethane	0.43	J	1.0	0.39	ug/L	1		8260C	Total/NA
Chloroform	5.4		1.0	0.34	ug/L	1		8260C	Total/NA
Trichloroethene	2.3		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: AZMW-4 — Lab Sample ID: 480-88435-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.82	J	1.0	0.34	ug/L	1		8260C	Total/NA
Trichloroethene	1.3		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: AZMW-6 — Lab Sample ID: 480-88435-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	2.6		1.0	0.34	ug/L	1		8260C	Total/NA
Trichloroethene	3.8	F1	1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: AZMW-2 — Lab Sample ID: 480-88435-8

No Detections.

Client Sample ID: AZMW-1 — Lab Sample ID: 480-88435-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	5.0		1.0	0.34	ug/L	1		8260C	Total/NA
Chloromethane	0.76	J	1.0	0.35	ug/L	1		8260C	Total/NA

Client Sample ID: AZMW-5 — Lab Sample ID: 480-88435-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	3.5		1.0	0.34	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: AZMW-5 (Continued) — Lab Sample ID: 480-88435-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloromethane	0.38	J	1.0	0.35	ug/L	1		8260C	Total/NA

Client Sample ID: DUP 1 — Lab Sample ID: 480-88435-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	1.4		1.0	0.34	ug/L	1		8260C	Total/NA
Trichloroethene	1.9		1.0	0.46	ug/L	1		8260C	Total/NA

Client Sample ID: DUP 2 — Lab Sample ID: 480-88435-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	18		1.0	0.34	ug/L	1		8260C	Total/NA

Client Sample ID: TRIP BLANK — Lab Sample ID: 480-88435-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	6.1	J	10	3.0	ug/L	1		8260C	Total/NA
Chloromethane	0.39	J	1.0	0.35	ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: MW-7
Date Collected: 10/01/15 10:20
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-1
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			10/13/15 16:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 16:15	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 16:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 16:15	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 16:15	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 16:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 16:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 16:15	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 16:15	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 16:15	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 16:15	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 16:15	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 16:15	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 16:15	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 16:15	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 16:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 16:15	1
Acetone	ND		10	3.0	ug/L			10/13/15 16:15	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 16:15	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 16:15	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 16:15	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 16:15	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 16:15	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 16:15	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 16:15	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 16:15	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 16:15	1
Chloroform	**1.2**		1.0	0.34	ug/L			10/13/15 16:15	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 16:15	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 16:15	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 16:15	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 16:15	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 16:15	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 16:15	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 16:15	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 16:15	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 16:15	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 16:15	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 16:15	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 16:15	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 16:15	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 16:15	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 16:15	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 16:15	1
Trichloroethene	**1.6**		1.0	0.46	ug/L			10/13/15 16:15	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 16:15	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 16:15	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 16:15	1

Client Sample ID: MW-7

Date Collected: 10/01/15 10:20
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-1
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					10/13/15 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		66 - 137		10/13/15 16:15	1
Toluene-d8 (Surr)	96		71 - 126		10/13/15 16:15	1
4-Bromofluorobenzene (Surr)	91		73 - 120		10/13/15 16:15	1
Dibromofluoromethane (Surr)	105		60 - 140		10/13/15 16:15	1

Client Sample ID: MW-6

Date Collected: 10/01/15 12:15
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-2
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			10/13/15 16:39	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 16:39	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 16:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 16:39	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 16:39	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 16:39	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 16:39	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 16:39	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 16:39	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 16:39	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 16:39	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 16:39	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 16:39	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 16:39	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 16:39	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 16:39	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 16:39	1
Acetone	ND		10	3.0	ug/L			10/13/15 16:39	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 16:39	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 16:39	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 16:39	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 16:39	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 16:39	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 16:39	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 16:39	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 16:39	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 16:39	1
Chloroform	ND		1.0	0.34	ug/L			10/13/15 16:39	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 16:39	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 16:39	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 16:39	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 16:39	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 16:39	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 16:39	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 16:39	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 16:39	1

Client Sample ID: MW-6

Date Collected: 10/01/15 12:15
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 16:39	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 16:39	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 16:39	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 16:39	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 16:39	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 16:39	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 16:39	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 16:39	1
Trichloroethene	ND		1.0	0.46	ug/L			10/13/15 16:39	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 16:39	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 16:39	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 16:39	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 16:39*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*96*		*66 - 137*		*10/13/15 16:39*	*1*
Toluene-d8 (Surr)	*95*		*71 - 126*		*10/13/15 16:39*	*1*
4-Bromofluorobenzene (Surr)	*84*		*73 - 120*		*10/13/15 16:39*	*1*
Dibromofluoromethane (Surr)	*106*		*60 - 140*		*10/13/15 16:39*	*1*

Client Sample ID: AZMW-8

Date Collected: 10/02/15 09:50
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-3

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			10/13/15 17:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 17:02	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 17:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 17:02	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 17:02	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 17:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 17:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 17:02	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 17:02	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 17:02	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 17:02	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 17:02	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 17:02	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 17:02	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 17:02	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 17:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 17:02	1
Acetone	ND		10	3.0	ug/L			10/13/15 17:02	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 17:02	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 17:02	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 17:02	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 17:02	1

Client Sample ID: AZMW-8

Date Collected: 10/02/15 09:50
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 17:02	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 17:02	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 17:02	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 17:02	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 17:02	1
Chloroform	**18**		1.0	0.34	ug/L			10/13/15 17:02	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 17:02	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 17:02	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 17:02	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 17:02	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 17:02	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 17:02	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 17:02	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 17:02	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 17:02	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 17:02	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 17:02	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 17:02	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 17:02	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 17:02	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 17:02	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 17:02	1
Trichloroethene	ND		1.0	0.46	ug/L			10/13/15 17:02	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 17:02	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 17:02	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 17:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 17:02*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*10/13/15 17:02*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*10/13/15 17:02*	*1*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*10/13/15 17:02*	*1*
Dibromofluoromethane (Surr)	*101*		*60 - 140*		*10/13/15 17:02*	*1*

Client Sample ID: AZMW-7

Date Collected: 10/02/15 10:10
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-4

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			10/13/15 17:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 17:26	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 17:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 17:26	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 17:26	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 17:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 17:26	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 17:26	1

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: AZMW-7
Date Collected: 10/02/15 10:10
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 17:26	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 17:26	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 17:26	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 17:26	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 17:26	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 17:26	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 17:26	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 17:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 17:26	1
Acetone	ND		10	3.0	ug/L			10/13/15 17:26	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 17:26	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 17:26	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 17:26	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 17:26	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 17:26	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 17:26	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 17:26	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 17:26	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 17:26	1
Chloroform	**0.68**	**J**	1.0	0.34	ug/L			10/13/15 17:26	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 17:26	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 17:26	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 17:26	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 17:26	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 17:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 17:26	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 17:26	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 17:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 17:26	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 17:26	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 17:26	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 17:26	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 17:26	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 17:26	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 17:26	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 17:26	1
Trichloroethene	**1.4**		1.0	0.46	ug/L			10/13/15 17:26	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 17:26	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 17:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 17:26	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 17:26*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*		*10/13/15 17:26*	*1*
Toluene-d8 (Surr)	*111*		*71 - 126*		*10/13/15 17:26*	*1*
4-Bromofluorobenzene (Surr)	*99*		*73 - 120*		*10/13/15 17:26*	*1*
Dibromofluoromethane (Surr)	*106*		*60 - 140*		*10/13/15 17:26*	*1*

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: AZMW-3
Date Collected: 10/02/15 11:50
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-5
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			10/13/15 17:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 17:50	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 17:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 17:50	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 17:50	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 17:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 17:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 17:50	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 17:50	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 17:50	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 17:50	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 17:50	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 17:50	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 17:50	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 17:50	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 17:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 17:50	1
Acetone	ND		10	3.0	ug/L			10/13/15 17:50	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 17:50	1
Bromodichloromethane	**0.43**	**J**	1.0	0.39	ug/L			10/13/15 17:50	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 17:50	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 17:50	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 17:50	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 17:50	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 17:50	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 17:50	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 17:50	1
Chloroform	**5.4**		1.0	0.34	ug/L			10/13/15 17:50	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 17:50	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 17:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 17:50	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 17:50	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 17:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 17:50	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 17:50	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 17:50	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 17:50	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 17:50	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 17:50	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 17:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 17:50	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 17:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 17:50	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 17:50	1
Trichloroethene	**2.3**		1.0	0.46	ug/L			10/13/15 17:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 17:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 17:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 17:50	1

Client Sample ID: AZMW-3

Lab Sample ID: 480-88435-5
Matrix: Water
Date Collected: 10/02/15 11:50
Date Received: 10/06/15 01:30

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					10/13/15 17:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		66 - 137		10/13/15 17:50	1
Toluene-d8 (Surr)	90		71 - 126		10/13/15 17:50	1
4-Bromofluorobenzene (Surr)	89		73 - 120		10/13/15 17:50	1
Dibromofluoromethane (Surr)	107		60 - 140		10/13/15 17:50	1

Client Sample ID: AZMW-4

Lab Sample ID: 480-88435-6
Matrix: Water
Date Collected: 10/02/15 12:10
Date Received: 10/06/15 01:30

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			10/13/15 18:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 18:13	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 18:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 18:13	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 18:13	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 18:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 18:13	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 18:13	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 18:13	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 18:13	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 18:13	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 18:13	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 18:13	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 18:13	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 18:13	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 18:13	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 18:13	1
Acetone	ND		10	3.0	ug/L			10/13/15 18:13	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 18:13	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 18:13	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 18:13	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 18:13	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 18:13	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 18:13	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 18:13	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 18:13	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 18:13	1
Chloroform	**0.82**	**J**	1.0	0.34	ug/L			10/13/15 18:13	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 18:13	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 18:13	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 18:13	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 18:13	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 18:13	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 18:13	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 18:13	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 18:13	1

Client Sample ID: AZMW-4

Lab Sample ID: 480-88435-6
Date Collected: 10/02/15 12:10
Matrix: Water
Date Received: 10/06/15 01:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 18:13	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 18:13	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 18:13	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 18:13	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 18:13	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 18:13	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 18:13	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 18:13	1
Trichloroethene	**1.3**		1.0	0.46	ug/L			10/13/15 18:13	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 18:13	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 18:13	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 18:13	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 18:13*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*66 - 137*		*10/13/15 18:13*	*1*
Toluene-d8 (Surr)	*98*		*71 - 126*		*10/13/15 18:13*	*1*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*10/13/15 18:13*	*1*
Dibromofluoromethane (Surr)	*110*		*60 - 140*		*10/13/15 18:13*	*1*

Client Sample ID: AZMW-6

Lab Sample ID: 480-88435-7
Date Collected: 10/02/15 12:30
Matrix: Water
Date Received: 10/06/15 01:30

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			10/13/15 18:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 18:37	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 18:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 18:37	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 18:37	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 18:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 18:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 18:37	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 18:37	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 18:37	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 18:37	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 18:37	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 18:37	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 18:37	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 18:37	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 18:37	1
4-Methyl-2-pentanone (MIBK)	ND	F1	5.0	2.1	ug/L			10/13/15 18:37	1
Acetone	ND		10	3.0	ug/L			10/13/15 18:37	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 18:37	1
Bromodichloromethane	ND	F2	1.0	0.39	ug/L			10/13/15 18:37	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 18:37	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 18:37	1

Client Sample ID: AZMW-6

Lab Sample ID: 480-88435-7

Date Collected: 10/02/15 12:30

Matrix: Water

Date Received: 10/06/15 01:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 18:37	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 18:37	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 18:37	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 18:37	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 18:37	1
Chloroform	**2.6**		1.0	0.34	ug/L			10/13/15 18:37	1
Chloromethane	ND	F1	1.0	0.35	ug/L			10/13/15 18:37	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 18:37	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 18:37	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 18:37	1
Dichlorodifluoromethane	ND	F1	1.0	0.68	ug/L			10/13/15 18:37	1
Ethylbenzene	ND	F2 F1	1.0	0.74	ug/L			10/13/15 18:37	1
Isopropylbenzene	ND	F1 *	1.0	0.79	ug/L			10/13/15 18:37	1
Methyl acetate	ND	F1	2.5	1.3	ug/L			10/13/15 18:37	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 18:37	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 18:37	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 18:37	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 18:37	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 18:37	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 18:37	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 18:37	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 18:37	1
Trichloroethene	**3.8**	**F1**	1.0	0.46	ug/L			10/13/15 18:37	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 18:37	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 18:37	1
Xylenes, Total	ND	F1	2.0	0.66	ug/L			10/13/15 18:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 18:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*66 - 137*		*10/13/15 18:37*	*1*
Toluene-d8 (Surr)	*94*		*71 - 126*		*10/13/15 18:37*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*10/13/15 18:37*	*1*
Dibromofluoromethane (Surr)	*107*		*60 - 140*		*10/13/15 18:37*	*1*

Client Sample ID: AZMW-2

Lab Sample ID: 480-88435-8

Date Collected: 10/02/15 13:10

Matrix: Water

Date Received: 10/06/15 01:30

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			10/13/15 19:02	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 19:02	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 19:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 19:02	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 19:02	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 19:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 19:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 19:02	1

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: AZMW-2
Date Collected: 10/02/15 13:10
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 19:02	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 19:02	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 19:02	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 19:02	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 19:02	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 19:02	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 19:02	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 19:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 19:02	1
Acetone	ND		10	3.0	ug/L			10/13/15 19:02	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 19:02	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 19:02	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 19:02	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 19:02	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 19:02	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 19:02	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 19:02	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 19:02	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 19:02	1
Chloroform	ND		1.0	0.34	ug/L			10/13/15 19:02	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 19:02	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 19:02	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 19:02	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 19:02	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 19:02	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 19:02	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 19:02	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 19:02	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 19:02	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 19:02	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 19:02	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 19:02	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 19:02	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 19:02	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 19:02	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 19:02	1
Trichloroethene	ND		1.0	0.46	ug/L			10/13/15 19:02	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 19:02	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 19:02	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 19:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 19:02*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*10/13/15 19:02*	*1*
Toluene-d8 (Surr)	*91*		*71 - 126*		*10/13/15 19:02*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*10/13/15 19:02*	*1*
Dibromofluoromethane (Surr)	*108*		*60 - 140*		*10/13/15 19:02*	*1*

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: AZMW-1
Date Collected: 10/02/15 14:35
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-9
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			10/13/15 19:26	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 19:26	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 19:26	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 19:26	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 19:26	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 19:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 19:26	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 19:26	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 19:26	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 19:26	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 19:26	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 19:26	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 19:26	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 19:26	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 19:26	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 19:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 19:26	1
Acetone	ND		10	3.0	ug/L			10/13/15 19:26	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 19:26	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 19:26	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 19:26	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 19:26	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 19:26	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 19:26	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 19:26	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 19:26	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 19:26	1
Chloroform	**5.0**		1.0	0.34	ug/L			10/13/15 19:26	1
Chloromethane	**0.76**	**J**	1.0	0.35	ug/L			10/13/15 19:26	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 19:26	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 19:26	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 19:26	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 19:26	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 19:26	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 19:26	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 19:26	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 19:26	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 19:26	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 19:26	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 19:26	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 19:26	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 19:26	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 19:26	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 19:26	1
Trichloroethene	ND		1.0	0.46	ug/L			10/13/15 19:26	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 19:26	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 19:26	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 19:26	1

Client Sample ID: AZMW-1

Lab Sample ID: 480-88435-9

Date Collected: 10/02/15 14:35

Matrix: Water

Date Received: 10/06/15 01:30

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					10/13/15 19:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		66 - 137		10/13/15 19:26	1
Toluene-d8 (Surr)	94		71 - 126		10/13/15 19:26	1
4-Bromofluorobenzene (Surr)	88		73 - 120		10/13/15 19:26	1
Dibromofluoromethane (Surr)	111		60 - 140		10/13/15 19:26	1

Client Sample ID: AZMW-5

Lab Sample ID: 480-88435-10

Date Collected: 10/02/15 14:50

Matrix: Water

Date Received: 10/06/15 01:30

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			10/13/15 19:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 19:50	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 19:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 19:50	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 19:50	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 19:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 19:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 19:50	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 19:50	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 19:50	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 19:50	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 19:50	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 19:50	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 19:50	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 19:50	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 19:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 19:50	1
Acetone	ND		10	3.0	ug/L			10/13/15 19:50	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 19:50	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 19:50	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 19:50	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 19:50	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 19:50	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 19:50	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 19:50	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 19:50	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 19:50	1
Chloroform	**3.5**		1.0	0.34	ug/L			10/13/15 19:50	1
Chloromethane	**0.38**	**J**	1.0	0.35	ug/L			10/13/15 19:50	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 19:50	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 19:50	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 19:50	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 19:50	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 19:50	1
Isopropylbenzene	ND	*	1.0	0.79	ug/L			10/13/15 19:50	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 19:50	1

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: AZMW-5

Lab Sample ID: 480-88435-10

Date Collected: 10/02/15 14:50

Matrix: Water

Date Received: 10/06/15 01:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 19:50	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 19:50	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 19:50	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 19:50	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 19:50	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 19:50	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 19:50	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 19:50	1
Trichloroethene	ND		1.0	0.46	ug/L			10/13/15 19:50	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 19:50	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 19:50	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 19:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 19:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*66 - 137*		*10/13/15 19:50*	*1*
Toluene-d8 (Surr)	*97*		*71 - 126*		*10/13/15 19:50*	*1*
4-Bromofluorobenzene (Surr)	*88*		*73 - 120*		*10/13/15 19:50*	*1*
Dibromofluoromethane (Surr)	*109*		*60 - 140*		*10/13/15 19:50*	*1*

Client Sample ID: DUP 1

Lab Sample ID: 480-88435-11

Date Collected: 10/01/15 10:30

Matrix: Water

Date Received: 10/06/15 01:30

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			10/14/15 16:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/14/15 16:09	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/14/15 16:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/14/15 16:09	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/14/15 16:09	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/14/15 16:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/14/15 16:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/14/15 16:09	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/14/15 16:09	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/14/15 16:09	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/14/15 16:09	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/14/15 16:09	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/14/15 16:09	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/14/15 16:09	1
2-Hexanone	ND		5.0	1.2	ug/L			10/14/15 16:09	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/14/15 16:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/14/15 16:09	1
Acetone	ND		10	3.0	ug/L			10/14/15 16:09	1
Benzene	ND		1.0	0.41	ug/L			10/14/15 16:09	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/14/15 16:09	1
Bromoform	ND		1.0	0.26	ug/L			10/14/15 16:09	1
Bromomethane	ND		1.0	0.69	ug/L			10/14/15 16:09	1

Client Sample ID: DUP 1

Date Collected: 10/01/15 10:30
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.19	ug/L			10/14/15 16:09	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/14/15 16:09	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/14/15 16:09	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/14/15 16:09	1
Chloroethane	ND		1.0	0.32	ug/L			10/14/15 16:09	1
Chloroform	**1.4**		1.0	0.34	ug/L			10/14/15 16:09	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/15 16:09	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/14/15 16:09	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/14/15 16:09	1
Cyclohexane	ND		1.0	0.18	ug/L			10/14/15 16:09	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/14/15 16:09	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/15 16:09	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/14/15 16:09	1
Methyl acetate	ND		2.5	1.3	ug/L			10/14/15 16:09	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/15 16:09	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/14/15 16:09	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/14/15 16:09	1
Styrene	ND		1.0	0.73	ug/L			10/14/15 16:09	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/14/15 16:09	1
Toluene	ND		1.0	0.51	ug/L			10/14/15 16:09	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/14/15 16:09	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/14/15 16:09	1
Trichloroethene	**1.9**		1.0	0.46	ug/L			10/14/15 16:09	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/14/15 16:09	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/14/15 16:09	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/15 16:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/14/15 16:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*95*		*66 - 137*		*10/14/15 16:09*	*1*
Toluene-d8 (Surr)	*96*		*71 - 126*		*10/14/15 16:09*	*1*
4-Bromofluorobenzene (Surr)	*88*		*73 - 120*		*10/14/15 16:09*	*1*
Dibromofluoromethane (Surr)	*107*		*60 - 140*		*10/14/15 16:09*	*1*

Client Sample ID: DUP 2

Date Collected: 10/02/15 10:00
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-12
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			10/14/15 16:32	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/14/15 16:32	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/14/15 16:32	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/14/15 16:32	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/14/15 16:32	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/14/15 16:32	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/14/15 16:32	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/14/15 16:32	1

Client Sample ID: DUP 2
Date Collected: 10/02/15 10:00
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-12
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/14/15 16:32	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/14/15 16:32	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/14/15 16:32	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/14/15 16:32	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/14/15 16:32	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/14/15 16:32	1
2-Hexanone	ND		5.0	1.2	ug/L			10/14/15 16:32	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/14/15 16:32	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/14/15 16:32	1
Acetone	ND		10	3.0	ug/L			10/14/15 16:32	1
Benzene	ND		1.0	0.41	ug/L			10/14/15 16:32	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/14/15 16:32	1
Bromoform	ND		1.0	0.26	ug/L			10/14/15 16:32	1
Bromomethane	ND		1.0	0.69	ug/L			10/14/15 16:32	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/14/15 16:32	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/14/15 16:32	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/14/15 16:32	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/14/15 16:32	1
Chloroethane	ND		1.0	0.32	ug/L			10/14/15 16:32	1
Chloroform	**18**		1.0	0.34	ug/L			10/14/15 16:32	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/15 16:32	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/14/15 16:32	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/14/15 16:32	1
Cyclohexane	ND		1.0	0.18	ug/L			10/14/15 16:32	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/14/15 16:32	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/15 16:32	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/14/15 16:32	1
Methyl acetate	ND		2.5	1.3	ug/L			10/14/15 16:32	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/15 16:32	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/14/15 16:32	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/14/15 16:32	1
Styrene	ND		1.0	0.73	ug/L			10/14/15 16:32	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/14/15 16:32	1
Toluene	ND		1.0	0.51	ug/L			10/14/15 16:32	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/14/15 16:32	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/14/15 16:32	1
Trichloroethene	ND		1.0	0.46	ug/L			10/14/15 16:32	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/14/15 16:32	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/14/15 16:32	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/15 16:32	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/14/15 16:32*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*92*		*66 - 137*		*10/14/15 16:32*	*1*
Toluene-d8 (Surr)	*94*		*71 - 126*		*10/14/15 16:32*	*1*
4-Bromofluorobenzene (Surr)	*88*		*73 - 120*		*10/14/15 16:32*	*1*
Dibromofluoromethane (Surr)	*104*		*60 - 140*		*10/14/15 16:32*	*1*

Client Sample ID: TRIP BLANK

Date Collected: 10/02/15 00:00
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-13

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			10/14/15 04:11	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/14/15 04:11	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/14/15 04:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/14/15 04:11	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/14/15 04:11	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/14/15 04:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/14/15 04:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/14/15 04:11	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/14/15 04:11	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/14/15 04:11	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/14/15 04:11	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/14/15 04:11	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/14/15 04:11	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/14/15 04:11	1
2-Hexanone	ND		5.0	1.2	ug/L			10/14/15 04:11	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/14/15 04:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/14/15 04:11	1
Acetone	**6.1**	**J**	10	3.0	ug/L			10/14/15 04:11	1
Benzene	ND		1.0	0.41	ug/L			10/14/15 04:11	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/14/15 04:11	1
Bromoform	ND		1.0	0.26	ug/L			10/14/15 04:11	1
Bromomethane	ND		1.0	0.69	ug/L			10/14/15 04:11	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/14/15 04:11	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/14/15 04:11	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/14/15 04:11	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/14/15 04:11	1
Chloroethane	ND		1.0	0.32	ug/L			10/14/15 04:11	1
Chloroform	ND		1.0	0.34	ug/L			10/14/15 04:11	1
Chloromethane	**0.39**	**J**	1.0	0.35	ug/L			10/14/15 04:11	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/14/15 04:11	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/14/15 04:11	1
Cyclohexane	ND		1.0	0.18	ug/L			10/14/15 04:11	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/14/15 04:11	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/15 04:11	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/14/15 04:11	1
Methyl acetate	ND	*	2.5	1.3	ug/L			10/14/15 04:11	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/15 04:11	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/14/15 04:11	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/14/15 04:11	1
Styrene	ND		1.0	0.73	ug/L			10/14/15 04:11	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/14/15 04:11	1
Toluene	ND		1.0	0.51	ug/L			10/14/15 04:11	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/14/15 04:11	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/14/15 04:11	1
Trichloroethene	ND		1.0	0.46	ug/L			10/14/15 04:11	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/14/15 04:11	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/14/15 04:11	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/15 04:11	1

Client Sample ID: TRIP BLANK
Date Collected: 10/02/15 00:00
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-13
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					10/14/15 04:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		66 - 137		10/14/15 04:11	1
Toluene-d8 (Surr)	95		71 - 126		10/14/15 04:11	1
4-Bromofluorobenzene (Surr)	85		73 - 120		10/14/15 04:11	1
Dibromofluoromethane (Surr)	105		60 - 140		10/14/15 04:11	1

Surrogate Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	12DCE (66-137)	TOL (71-126)	BFB (73-120)	DBFM (60-140)
480-88435-1	MW-7	95	96	91	105
480-88435-2	MW-6	96	95	84	106
480-88435-3	AZMW-8	94	98	86	101
480-88435-4	AZMW-7	97	111	99	106
480-88435-5	AZMW-3	97	90	89	107
480-88435-6	AZMW-4	90	98	86	110
480-88435-7	AZMW-6	97	94	87	107
480-88435-7 MS	AZMW-6	95	101	96	105
480-88435-7 MSD	AZMW-6	89	95	100	100
480-88435-8	AZMW-2	94	91	87	108
480-88435-9	AZMW-1	101	94	88	111
480-88435-10	AZMW-5	99	97	88	109
480-88435-11	DUP 1	95	96	88	107
480-88435-12	DUP 2	92	94	88	104
480-88435-13	TRIP BLANK	93	95	85	105
LCS 480-268427/28	Lab Control Sample	92	99	96	101
LCS 480-268574/4	Lab Control Sample	98	98	91	108
LCS 480-268649/21	Lab Control Sample	96	98	90	105
MB 480-268427/7	Method Blank	100	97	89	107
MB 480-268574/6	Method Blank	93	96	87	106
MB 480-268649/7	Method Blank	94	95	86	107

Surrogate Legend

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

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

Lab Sample ID: MB 480-268427/7
Matrix: Water
Analysis Batch: 268427

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			10/13/15 12:19	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 12:19	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 12:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 12:19	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 12:19	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 12:19	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 12:19	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 12:19	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 12:19	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 12:19	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 12:19	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 12:19	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 12:19	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 12:19	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 12:19	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 12:19	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 12:19	1
Acetone	ND		10	3.0	ug/L			10/13/15 12:19	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 12:19	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 12:19	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 12:19	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 12:19	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 12:19	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 12:19	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 12:19	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 12:19	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 12:19	1
Chloroform	ND		1.0	0.34	ug/L			10/13/15 12:19	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 12:19	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 12:19	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 12:19	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 12:19	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 12:19	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 12:19	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/13/15 12:19	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 12:19	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 12:19	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 12:19	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 12:19	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 12:19	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 12:19	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 12:19	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 12:19	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 12:19	1
Trichloroethene	ND		1.0	0.46	ug/L			10/13/15 12:19	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 12:19	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 12:19	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 12:19	1

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

Lab Sample ID: MB 480-268427/7
Matrix: Water
Analysis Batch: 268427

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

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					10/13/15 12:19	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		66 - 137		10/13/15 12:19	1
Toluene-d8 (Surr)	97		71 - 126		10/13/15 12:19	1
4-Bromofluorobenzene (Surr)	89		73 - 120		10/13/15 12:19	1
Dibromofluoromethane (Surr)	107		60 - 140		10/13/15 12:19	1

Lab Sample ID: LCS 480-268427/28
Matrix: Water
Analysis Batch: 268427

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	26.7		ug/L		107	71 - 129
1,1-Dichloroethene	25.0	26.9		ug/L		108	58 - 121
1,2-Dichlorobenzene	25.0	27.1		ug/L		109	80 - 124
1,2-Dichloroethane	25.0	24.7		ug/L		99	75 - 127
Benzene	25.0	27.3		ug/L		109	71 - 124
Chlorobenzene	25.0	27.0		ug/L		108	72 - 120
cis-1,2-Dichloroethene	25.0	27.7		ug/L		111	74 - 124
Ethylbenzene	25.0	26.2		ug/L		105	77 - 123
Methyl tert-butyl ether	25.0	22.6		ug/L		90	64 - 127
Tetrachloroethene	25.0	24.5		ug/L		98	74 - 122
Toluene	25.0	26.4		ug/L		106	80 - 122
trans-1,2-Dichloroethene	25.0	27.1		ug/L		108	73 - 127
Trichloroethene	25.0	27.8		ug/L		111	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	92		66 - 137
Toluene-d8 (Surr)	99		71 - 126
4-Bromofluorobenzene (Surr)	96		73 - 120
Dibromofluoromethane (Surr)	101		60 - 140

Lab Sample ID: 480-88435-7 MS
Matrix: Water
Analysis Batch: 268427

Client Sample ID: AZMW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	ND		25.0	29.0		ug/L		116	71 - 129
1,1-Dichloroethene	ND		25.0	28.6		ug/L		114	58 - 121
1,2-Dichlorobenzene	ND		25.0	27.4		ug/L		110	80 - 124
1,2-Dichloroethane	ND		25.0	26.1		ug/L		104	75 - 127
Benzene	ND		25.0	29.0		ug/L		116	71 - 124
Chlorobenzene	ND		25.0	28.0		ug/L		112	72 - 120
cis-1,2-Dichloroethene	ND		25.0	28.7		ug/L		115	74 - 124
Ethylbenzene	ND	F2 F1	25.0	27.1		ug/L		108	77 - 123
Methyl tert-butyl ether	ND		25.0	22.3		ug/L		89	64 - 127

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

Lab Sample ID: 480-88435-7 MS
Matrix: Water
Analysis Batch: 268427

Client Sample ID: AZMW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	ND		25.0	28.7		ug/L		115	74 - 122
Toluene	ND		25.0	29.2		ug/L		117	80 - 122
trans-1,2-Dichloroethene	ND		25.0	29.6		ug/L		118	73 - 127
Trichloroethene	3.8	F1	25.0	33.2		ug/L		118	74 - 123

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*66 - 137*
Toluene-d8 (Surr)	*101*		*71 - 126*
4-Bromofluorobenzene (Surr)	*96*		*73 - 120*
Dibromofluoromethane (Surr)	*105*		*60 - 140*

Lab Sample ID: 480-88435-7 MSD
Matrix: Water
Analysis Batch: 268427

Client Sample ID: AZMW-6
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	ND		25.0	29.0		ug/L		116	71 - 129	0	20
1,1-Dichloroethene	ND		25.0	29.6		ug/L		118	58 - 121	3	16
1,2-Dichlorobenzene	ND		25.0	28.2		ug/L		113	80 - 124	3	20
1,2-Dichloroethane	ND		25.0	25.0		ug/L		100	75 - 127	4	20
Benzene	ND		25.0	29.2		ug/L		117	71 - 124	1	13
Chlorobenzene	ND		25.0	29.0		ug/L		116	72 - 120	4	25
cis-1,2-Dichloroethene	ND		25.0	29.7		ug/L		119	74 - 124	3	15
Ethylbenzene	ND	F2 F1	25.0	31.8	F1 F2	ug/L		127	77 - 123	16	15
Methyl tert-butyl ether	ND		25.0	22.9		ug/L		92	64 - 127	3	37
Tetrachloroethene	ND		25.0	28.2		ug/L		113	74 - 122	2	20
Toluene	ND		25.0	28.4		ug/L		114	80 - 122	3	15
trans-1,2-Dichloroethene	ND		25.0	29.6		ug/L		118	73 - 127	0	20
Trichloroethene	3.8	F1	25.0	35.0	F1	ug/L		125	74 - 123	5	16

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*89*		*66 - 137*
Toluene-d8 (Surr)	*95*		*71 - 126*
4-Bromofluorobenzene (Surr)	*100*		*73 - 120*
Dibromofluoromethane (Surr)	*100*		*60 - 140*

Lab Sample ID: MB 480-268574/6
Matrix: Water
Analysis Batch: 268574

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			10/13/15 22:56	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/13/15 22:56	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/13/15 22:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/13/15 22:56	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/13/15 22:56	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/13/15 22:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/13/15 22:56	1

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

Lab Sample ID: MB 480-268574/6
Matrix: Water
Analysis Batch: 268574

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/13/15 22:56	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/13/15 22:56	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/13/15 22:56	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/13/15 22:56	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/13/15 22:56	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/13/15 22:56	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/13/15 22:56	1
2-Hexanone	ND		5.0	1.2	ug/L			10/13/15 22:56	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/13/15 22:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/13/15 22:56	1
Acetone	ND		10	3.0	ug/L			10/13/15 22:56	1
Benzene	ND		1.0	0.41	ug/L			10/13/15 22:56	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/13/15 22:56	1
Bromoform	ND		1.0	0.26	ug/L			10/13/15 22:56	1
Bromomethane	ND		1.0	0.69	ug/L			10/13/15 22:56	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/13/15 22:56	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/13/15 22:56	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/13/15 22:56	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/13/15 22:56	1
Chloroethane	ND		1.0	0.32	ug/L			10/13/15 22:56	1
Chloroform	ND		1.0	0.34	ug/L			10/13/15 22:56	1
Chloromethane	ND		1.0	0.35	ug/L			10/13/15 22:56	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/13/15 22:56	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/13/15 22:56	1
Cyclohexane	ND		1.0	0.18	ug/L			10/13/15 22:56	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/13/15 22:56	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/13/15 22:56	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/13/15 22:56	1
Methyl acetate	ND		2.5	1.3	ug/L			10/13/15 22:56	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/13/15 22:56	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/13/15 22:56	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/13/15 22:56	1
Styrene	ND		1.0	0.73	ug/L			10/13/15 22:56	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/13/15 22:56	1
Toluene	ND		1.0	0.51	ug/L			10/13/15 22:56	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/13/15 22:56	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/13/15 22:56	1
Trichloroethene	ND		1.0	0.46	ug/L			10/13/15 22:56	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/13/15 22:56	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/13/15 22:56	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/13/15 22:56	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/13/15 22:56*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*93*		*66 - 137*		*10/13/15 22:56*	*1*

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

Lab Sample ID: MB 480-268574/6
Matrix: Water
Analysis Batch: 268574

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*96*		*71 - 126*		*10/13/15 22:56*	*1*
4-Bromofluorobenzene (Surr)	*87*		*73 - 120*		*10/13/15 22:56*	*1*
Dibromofluoromethane (Surr)	*106*		*60 - 140*		*10/13/15 22:56*	*1*

Lab Sample ID: LCS 480-268574/4
Matrix: Water
Analysis Batch: 268574

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.9		ug/L		100	71 - 129
1,1-Dichloroethene	25.0	27.0		ug/L		108	58 - 121
1,2-Dichlorobenzene	25.0	24.9		ug/L		100	80 - 124
1,2-Dichloroethane	25.0	24.9		ug/L		100	75 - 127
Benzene	25.0	26.4		ug/L		106	71 - 124
Chlorobenzene	25.0	26.4		ug/L		106	72 - 120
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	74 - 124
Ethylbenzene	25.0	25.5		ug/L		102	77 - 123
Methyl tert-butyl ether	25.0	20.1		ug/L		80	64 - 127
Tetrachloroethene	25.0	23.9		ug/L		96	74 - 122
Toluene	25.0	25.3		ug/L		101	80 - 122
trans-1,2-Dichloroethene	25.0	26.2		ug/L		105	73 - 127
Trichloroethene	25.0	27.1		ug/L		108	74 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	*98*		*66 - 137*
Toluene-d8 (Surr)	*98*		*71 - 126*
4-Bromofluorobenzene (Surr)	*91*		*73 - 120*
Dibromofluoromethane (Surr)	*108*		*60 - 140*

Lab Sample ID: MB 480-268649/7
Matrix: Water
Analysis Batch: 268649

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			10/14/15 11:17	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.21	ug/L			10/14/15 11:17	1
1,1,2-Trichloroethane	ND		1.0	0.23	ug/L			10/14/15 11:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31	ug/L			10/14/15 11:17	1
1,1-Dichloroethane	ND		1.0	0.38	ug/L			10/14/15 11:17	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/14/15 11:17	1
1,2,4-Trichlorobenzene	ND		1.0	0.41	ug/L			10/14/15 11:17	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.39	ug/L			10/14/15 11:17	1
1,2-Dibromoethane	ND		1.0	0.73	ug/L			10/14/15 11:17	1
1,2-Dichlorobenzene	ND		1.0	0.79	ug/L			10/14/15 11:17	1
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/14/15 11:17	1
1,2-Dichloropropane	ND		1.0	0.72	ug/L			10/14/15 11:17	1
1,3-Dichlorobenzene	ND		1.0	0.78	ug/L			10/14/15 11:17	1
1,4-Dichlorobenzene	ND		1.0	0.84	ug/L			10/14/15 11:17	1

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

Lab Sample ID: MB 480-268649/7
Matrix: Water
Analysis Batch: 268649

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		5.0	1.2	ug/L			10/14/15 11:17	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/14/15 11:17	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1	ug/L			10/14/15 11:17	1
Acetone	ND		10	3.0	ug/L			10/14/15 11:17	1
Benzene	ND		1.0	0.41	ug/L			10/14/15 11:17	1
Bromodichloromethane	ND		1.0	0.39	ug/L			10/14/15 11:17	1
Bromoform	ND		1.0	0.26	ug/L			10/14/15 11:17	1
Bromomethane	ND		1.0	0.69	ug/L			10/14/15 11:17	1
Carbon disulfide	ND		1.0	0.19	ug/L			10/14/15 11:17	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/14/15 11:17	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/14/15 11:17	1
Dibromochloromethane	ND		1.0	0.32	ug/L			10/14/15 11:17	1
Chloroethane	ND		1.0	0.32	ug/L			10/14/15 11:17	1
Chloroform	ND		1.0	0.34	ug/L			10/14/15 11:17	1
Chloromethane	ND		1.0	0.35	ug/L			10/14/15 11:17	1
cis-1,2-Dichloroethene	ND		1.0	0.81	ug/L			10/14/15 11:17	1
cis-1,3-Dichloropropene	ND		1.0	0.36	ug/L			10/14/15 11:17	1
Cyclohexane	ND		1.0	0.18	ug/L			10/14/15 11:17	1
Dichlorodifluoromethane	ND		1.0	0.68	ug/L			10/14/15 11:17	1
Ethylbenzene	ND		1.0	0.74	ug/L			10/14/15 11:17	1
Isopropylbenzene	ND		1.0	0.79	ug/L			10/14/15 11:17	1
Methyl acetate	ND		2.5	1.3	ug/L			10/14/15 11:17	1
Methyl tert-butyl ether	ND		1.0	0.16	ug/L			10/14/15 11:17	1
Methylcyclohexane	ND		1.0	0.16	ug/L			10/14/15 11:17	1
Methylene Chloride	ND		1.0	0.44	ug/L			10/14/15 11:17	1
Styrene	ND		1.0	0.73	ug/L			10/14/15 11:17	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/14/15 11:17	1
Toluene	ND		1.0	0.51	ug/L			10/14/15 11:17	1
trans-1,2-Dichloroethene	ND		1.0	0.90	ug/L			10/14/15 11:17	1
trans-1,3-Dichloropropene	ND		1.0	0.37	ug/L			10/14/15 11:17	1
Trichloroethene	ND		1.0	0.46	ug/L			10/14/15 11:17	1
Trichlorofluoromethane	ND		1.0	0.88	ug/L			10/14/15 11:17	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/14/15 11:17	1
Xylenes, Total	ND		2.0	0.66	ug/L			10/14/15 11:17	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*10/14/15 11:17*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*66 - 137*		*10/14/15 11:17*	*1*
Toluene-d8 (Surr)	*95*		*71 - 126*		*10/14/15 11:17*	*1*
4-Bromofluorobenzene (Surr)	*86*		*73 - 120*		*10/14/15 11:17*	*1*
Dibromofluoromethane (Surr)	*107*		*60 - 140*		*10/14/15 11:17*	*1*

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

Lab Sample ID: LCS 480-268649/21
Matrix: Water
Analysis Batch: 268649

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	26.6		ug/L		106	71 - 129
1,1-Dichloroethene	25.0	27.8		ug/L		111	58 - 121
1,2-Dichlorobenzene	25.0	25.5		ug/L		102	80 - 124
1,2-Dichloroethane	25.0	25.6		ug/L		102	75 - 127
Benzene	25.0	26.2		ug/L		105	71 - 124
Chlorobenzene	25.0	26.3		ug/L		105	72 - 120
cis-1,2-Dichloroethene	25.0	26.6		ug/L		106	74 - 124
Ethylbenzene	25.0	25.7		ug/L		103	77 - 123
Methyl tert-butyl ether	25.0	22.3		ug/L		89	64 - 127
Tetrachloroethene	25.0	25.4		ug/L		102	74 - 122
Toluene	25.0	25.9		ug/L		104	80 - 122
trans-1,2-Dichloroethene	25.0	27.6		ug/L		110	73 - 127
Trichloroethene	25.0	27.9		ug/L		112	74 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*66 - 137*
Toluene-d8 (Surr)	*98*		*71 - 126*
4-Bromofluorobenzene (Surr)	*90*		*73 - 120*
Dibromofluoromethane (Surr)	*105*		*60 - 140*

QC Association Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

GC/MS VOA

Analysis Batch: 268427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-88435-1	MW-7	Total/NA	Water	8260C	
480-88435-2	MW-6	Total/NA	Water	8260C	
480-88435-3	AZMW-8	Total/NA	Water	8260C	
480-88435-4	AZMW-7	Total/NA	Water	8260C	
480-88435-5	AZMW-3	Total/NA	Water	8260C	
480-88435-6	AZMW-4	Total/NA	Water	8260C	
480-88435-7	AZMW-6	Total/NA	Water	8260C	
480-88435-7 MS	AZMW-6	Total/NA	Water	8260C	
480-88435-7 MSD	AZMW-6	Total/NA	Water	8260C	
480-88435-8	AZMW-2	Total/NA	Water	8260C	
480-88435-9	AZMW-1	Total/NA	Water	8260C	
480-88435-10	AZMW-5	Total/NA	Water	8260C	
LCS 480-268427/28	Lab Control Sample	Total/NA	Water	8260C	
MB 480-268427/7	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 268574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-88435-13	TRIP BLANK	Total/NA	Water	8260C	
LCS 480-268574/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-268574/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 268649

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-88435-11	DUP 1	Total/NA	Water	8260C	
480-88435-12	DUP 2	Total/NA	Water	8260C	
LCS 480-268649/21	Lab Control Sample	Total/NA	Water	8260C	
MB 480-268649/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: MW-7
Lab Sample ID: 480-88435-1
Date Collected: 10/01/15 10:20
Matrix: Water
Date Received: 10/06/15 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 16:15	SWO	TAL BUF

Client Sample ID: MW-6
Lab Sample ID: 480-88435-2
Date Collected: 10/01/15 12:15
Matrix: Water
Date Received: 10/06/15 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 16:39	SWO	TAL BUF

Client Sample ID: AZMW-8
Lab Sample ID: 480-88435-3
Date Collected: 10/02/15 09:50
Matrix: Water
Date Received: 10/06/15 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 17:02	SWO	TAL BUF

Client Sample ID: AZMW-7
Lab Sample ID: 480-88435-4
Date Collected: 10/02/15 10:10
Matrix: Water
Date Received: 10/06/15 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 17:26	SWO	TAL BUF

Client Sample ID: AZMW-3
Lab Sample ID: 480-88435-5
Date Collected: 10/02/15 11:50
Matrix: Water
Date Received: 10/06/15 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 17:50	SWO	TAL BUF

Client Sample ID: AZMW-4
Lab Sample ID: 480-88435-6
Date Collected: 10/02/15 12:10
Matrix: Water
Date Received: 10/06/15 01:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 18:13	SWO	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: AZMW-6
Date Collected: 10/02/15 12:30
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 18:37	SWO	TAL BUF

Client Sample ID: AZMW-2
Date Collected: 10/02/15 13:10
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 19:02	SWO	TAL BUF

Client Sample ID: AZMW-1
Date Collected: 10/02/15 14:35
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-9
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 19:26	SWO	TAL BUF

Client Sample ID: AZMW-5
Date Collected: 10/02/15 14:50
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268427	10/13/15 19:50	SWO	TAL BUF

Client Sample ID: DUP 1
Date Collected: 10/01/15 10:30
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-11
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268649	10/14/15 16:09	GVF	TAL BUF

Client Sample ID: DUP 2
Date Collected: 10/02/15 10:00
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-12
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268649	10/14/15 16:32	GVF	TAL BUF

Lab Chronicle

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Client Sample ID: TRIP BLANK

Date Collected: 10/02/15 00:00
Date Received: 10/06/15 01:30

Lab Sample ID: 480-88435-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	268574	10/14/15 04:11	GTG	TAL BUF

Laboratory References:

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

Certification Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

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	03-31-16

Method Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL BUF

Protocol References:

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

Sample Summary

Client: New York State D.E.C.
Project/Site: Former Ithaca Gun Factory #C755019A

TestAmerica Job ID: 480-88435-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-88435-1	MW-7	Water	10/01/15 10:20	10/06/15 01:30
480-88435-2	MW-6	Water	10/01/15 12:15	10/06/15 01:30
480-88435-3	AZMW-8	Water	10/02/15 09:50	10/06/15 01:30
480-88435-4	AZMW-7	Water	10/02/15 10:10	10/06/15 01:30
480-88435-5	AZMW-3	Water	10/02/15 11:50	10/06/15 01:30
480-88435-6	AZMW-4	Water	10/02/15 12:10	10/06/15 01:30
480-88435-7	AZMW-6	Water	10/02/15 12:30	10/06/15 01:30
480-88435-8	AZMW-2	Water	10/02/15 13:10	10/06/15 01:30
480-88435-9	AZMW-1	Water	10/02/15 14:35	10/06/15 01:30
480-88435-10	AZMW-5	Water	10/02/15 14:50	10/06/15 01:30
480-88435-11	DUP 1	Water	10/01/15 10:30	10/06/15 01:30
480-88435-12	DUP 2	Water	10/02/15 10:00	10/06/15 01:30
480-88435-13	TRIP BLANK	Water	10/02/15 00:00	10/06/15 01:30

TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, New York 14228
Phone (716) 691-2600

Albany Service Center
25 Kraft Avenue
Albany, NY 12205
Phone (518) 428-8140

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler:	Lab PM:	Carrier Tracking No(s): / COC No: 1
Client Contact: NYSDEC Region 7	Phone: (607)775-2545	E-Mail: gary.priscott@dec.ny.gov	Page: 1 of 1
Company: Aztech Technologies, Inc.		Analysis Requested	Job #:
Address: 5 McCrea Hill Rd	Due Date Requested:		
City: Ballston Spa	TAT Requested (days): normal		
State, Zip: NY 12020			
Phone: 518-885-5383	Quote #:		
Email:	PO #: Ithaca Gun Offsite C755019A		
Project Name/number: C755019A	WO #: TA Callout # C008010		
Site: Ithaca Gun Offsite	SSOW#:		

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, H - Ascorbic Acid, I - Ice, J - DI Water, M - Hexane, N - None, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, Z - other (specify)

Regulatory programs: MCP ☐ RCP ☐ DEP Form ☐ GW1/S1 ☐ CT RSR ☐ EDD Required ☐

480-88435 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Sampler's Initials	Field Filtered Sample?	Perform MS/MSD?	EPA 8260 (Mod)TCL list OLM04.2	Total Number of containers	Special Instructions/Note:
				Preservation Code:						
MW-7	10/1/15	10:20	G	GW	MO					
MW-6	10/1/15	12:15	G	GW	MO					
AZMW-8	10/2/15	9:50	G	GW	MO					
AZMW-7	10/2/15	10:10	G	GW	MO					
AZMW-3	10/2/15	11:50	G	GW	TR					
AZMW-4	10/2/15	12:10	G	GW	MO					
AZMW-6	10/2/15	12:30	G	GW	MO					
AZMW-2	10/2/15	1:10	G	GW	MO					
AZMW-1	10/2/15	2:33	G	GW	MO					
AZMW-5	10/2/15	2:50	G	GW	MO					

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) Category B

Special Instructions/QC Requirements: please send copy to btoran@aztechtech.com, tgiamichael@aztechtech.com

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/2/15 6:00pm	Aztech	[signature]	10/5/15 11:10	TA-ALB
[signature]	10/5/15 1800	TA-ALB	[signature]	10-6-15 0130	TAB

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: 1.4 #1

WI-QA-010 rev 0

TestAmerica Buffalo
10 Hazelwood Drive, Suite 106
Amherst, New York 14228
Phone (716) 691-2600

Albany Service Center
25 Kraft Avenue
Albany, NY 12205
Phone (518) 428-8140

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler:	Lab PM:	Carrier Tracking No(s):	COC No: 1
Client Contact: NYSDEC Region 7	Phone: (607)775-2545	E-Mail: gary.priscott@dec.ny.gov		Page: 1 of 12
Company: Aztech Technologies, Inc.				Job #:
Address: 5 McCrea Hill Rd	Due Date Requested:			
City: Ballston Spa	TAT Requested (days): normal			
State, Zip: NY 12020				
Phone: 518-885-5383	Quote #:			
Email:	PO #: Ithaca Gun Offsite C755019A			
Project Name/number: C755019A	WO #: TA Collect #C008010			
Site: Ithaca Gun Offsite	SSOW#:			

Analysis Requested: Field Filtered Sample?; Perform MS/MSD?; EPA 8260 (Mod)TCL list OLM04.2; Total Number of containers

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, H - Ascorbic Acid, I - Ice
J - DI Water, M - Hexane, N - None, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, Z - other (specify)

Regulatory programs: MCP ☐ RCP ☐ DEP Form ☐ GW1/S1 ☐ CT RSR ☐ EDD Required ☐

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Sampler's Initials	Field Filtered Sample?	Perform MS/MSD?	EPA 8260 (Mod)TCL list OLM04.2	Total Number of containers	Special Instructions/Note:
Dup 1	10/1/15	10:30	G	GW	MD					
Dup 2	10/2/15	10:00	G	GW	AD					
MS	10/2/15	12:35	G	GW	MD					
MSD	10/2/15	12:40	G	GW	MD					
Trip blank										

10/5/15

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) Category B

Special Instructions/QC Requirements: **please send copy to btoran@aztechtech.com, tgiamichael@aztechtech.com**

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/2/15 6:00 pm	Aztech	[signature]	10/5/15 11:10	TA-ALB
[signature]	10/5/15 1800	TA-ALB	[signature]	10-6-15 0150	TAB

Custody Seals Intact: △ Yes △ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.4 #1

WI QA 010 rev 0

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 480-88435-1

Login Number: 88435 **List Source: TestAmerica Buffalo**
List Number: 1
Creator: Williams, Christopher S

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.	False	REFER TO NCM
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.	True	
Sample containers have legible labels.	False	REFER TO NCM
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	AZTECH
Samples received within 48 hours of sampling.	False	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

Data Usability Summary Report

Aztech Environmental

Data Usability Summary Report

Former Ithaca Gun Factory Site #C755019A
Ithaca, New York

Groundwater Samples
Collected October 2015

Reviewed:
November 2015

ZDataReports
Data Management and Validation Services
118 Rose Lane Terrace, Syracuse, NY 13219, (716) 907-2341

Data Usability Summary Report

Groundwater Samples
Collected October 2015

Former Ithaca Gun Factory Site #C755019A
Ithaca, New York

Prepared By:

ZDataReports

Data Management and Validation Service
118 Rose Lane Terrace
Syracuse, New York 1219
(716) 907-2341

EXECUTIVE SUMMARY

This report addresses data quality for groundwater samples collected at the Former Ithaca Gun Factory Site #C755019A located in Ithaca, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Aztech Technologies, Inc. located in Ballston Spa, New York. Analytical services were provided by TestAmerica Laboratories, Inc. located in Amherst, New York.

The volatile organic analyses data were determined to be usable for qualitative and quantitative purposes as reported by the laboratory.

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Appendices

Appendix A - Data Validation Checklists

SECTION 1 - INTRODUCTION

1.1 Introduction

This report addresses data quality for groundwater samples collected at the Former Ithaca Gun Factory Site #C755019A located in Ithaca, New York. The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies. Sample collection was performed by Aztech Technologies, Inc. located in Ballston Spa, New York. Analytical services were provided by TestAmerica Laboratories, Inc. located in Amherst, New York. The quantity and types of samples submitted for data validation are tabulated below.

Table 1: Introduction - Sample Summary Table

SDG#	Date Collected	Sample Matrix	Sample Identification	
			Client ID	Laboratory ID
480-88435-1	10/01/2015	Water	MW-7	480-88435-1
			MW-6	480-88435-2
			DUP-1 (MW-7)	480-88435-11
	10/02/2015	Water	AZMW-8	480-88435-3
			AZMW-7	480-88435-4
			AZMW-3	480-88435-5
			AZMW-4	480-88435-6
			AZMW-6	480-88435-7
			AZMW-2	480-88435-8
			AZMW-1	480-88435-9
			AZMW-5	480-88435-10
			DUP-2 (AZMW-8)	480-88435-12
			TRIP BLANK	480-88435-13

1.2 Analytical Methods

The samples were analyzed for volatile organics (VOCs) following New York State Department of Environmental Conservation (NYSDEC) Analytical Services Protocol (ASP) methodologies (2005 update). Laboratory analyses were provided by TestAmerica Laboratories, Inc. located in Amherst, New York.

1.3 Validation Protocols

Data validation is a process that involves the evaluation of analytical data against prescribed quality control criteria to determine the usefulness of the data. The analytical data addressed in this report were evaluated utilizing the quality control criteria presented in the following documents:

- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA-540-R-08-01, June 2008.
- *CLP Organics Data Review and Preliminary Review*, SOP No. HW-6 Revision #14, USEPA Region II, September 2006.

- *Validating Volatile Organic Compounds By Gas Chromatography/Mass Spectrometry SW-846 Method 8260B*, SOP No. HW-24 Revision #2, USEPA Hazardous Waste Support Branch, October 2006.

- *Exhibit E of New York State Department of Environmental Conservation Analytical Services Protocol (NYSDEC ASP)*, NYSDEC June 2005.

1.3.1 Organic Parameters

The validation of organic parameters for this project followed the requirements presented in the analytical methodology and the data validation guidelines presented above. The following QA/QC parameters were evaluated:

Volatile Organics Analysis

1. Holding Times
2. GC/MS Instrument Tuning Criteria
3. Calibration
   a. Initial Calibration
   b. Continuing Calibration
4. Blank Analysis
5. Surrogate Recovery
6. Matrix Spike / Matrix Spike Duplicate Analysis
7. Reference Standard Analysis
8. Internal Standards Recovery
9. Compound Identification and Quantification
10. Field Duplicate Analysis
11. System Performance
12. Documentation Completeness
13. Overall Data Assessment

1.4 Data Qualifiers

The following qualifiers as specified in the guidance documents presented in Section 1.3 of this report have been used for this data validation.

U Indicates that the compound was analyzed for, but was not detected. The sample quantification limit is presented and adjusted for dilution. This qualifier is also used to signify that the detection limit of an analyte was raised due to blank contamination.

J Indicates that the result should be considered approximate. This qualifier is used when the data validation procedure identifies a deficiency in the data generation process.

UJ Indicates that the detection limit for the analyte in this sample should be considered approximate. This qualifier is used when the data validation process identifies a deficiency in the data generation process.

R Indicates that the previously reported detection limit or sample result has been rejected due to a major deficiency in the data generation procedure. The data are considered to be unusable for both qualitative and quantitative purposes.

The following sections of this document present a summary of the data validation process. Section 2 discusses data compliance with established QA/QC criteria and qualifications performed on the sample data. A discussion of the Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) of the data and data usability are discussed in Section 3. The USEPA Region II Data Validation Checklist is presented in Appendix A.

SECTION 2 - DATA VALIDATION SUMMARY

This section presents a discussion of QA/QC parameter compliance with established criteria and the qualification of data performed when QA/QC parameter deviations were identified. When several deviations from established QA/QC criteria were observed, the final qualifier assigned to the data was based on the cumulative effect of the deviations.

2.1 Volatile Organics Analysis

Data validation was performed for twelve groundwater samples and one trip blank sample. The QA/QC parameters presented in Section 1.3.1 of this report were found to be within specified limits without exception. The overall data assessment is summarized below.

Continuing Calibration

The continuing calibration percent difference (%D) limit, which requires the %D to be less than 25 percent, was exceeded for several compounds. Sample qualification included the approximation (J, UJ) of results when %D criteria were exceeded, but were less than 90 percent. Samples requiring qualification due to these deviations are tabulated below.

Table 2: Volatile Organics Analysis - Continuing Calibration Deviations

Date Analyzed	Compound	%D	Qualifier	Affected Samples
HP5975T 10/12/2015 10:44	Dichlorodifluoromethane Chloromethane Vinyl Chloride Methyl Acetate 2-Hexanone	-72.8 % -46.0 % -34.9 % -25.6 % 26.4 %	UJ UJ UJ UJ UJ	MW-7 MW-6 AZMW-8 AZMW-7 AZMW-3 AZMW-4 AZMW-6 AZMW-2 AZMW-1 AZMW-5
HP5975T 10/12/2015 21:21	4-Methyl-2-pentanone	-30.9 %	UJ	TRIP BLANK
HP5975T 10/14/2015 09:52	Methyl Acetate 2-Hexanone 1,2-Dibromo-3-chloropropane	-26.0 % -26.4 % -28.3 %	UJ UJ UJ	DUP-1 DUP-2

Matrix Spike Recovery

Matrix spike/matrix spike duplicate (MS/MSD) recovery criteria requiring compound recoveries to be within laboratory generated control limits were exceeded for several compounds. Qualification of sample results included the approximation of results when spike recoveries were greater than the upper limit, but less than 200 percent or less than the lower limit, but greater than 10 percent. Samples qualified due to MS/MSD recovery deviations are tabulated below.

Table 3: Volatile Organics Analysis - MS/MSD Analysis Deviations

MS/MSD Sample ID	Compound	Percent Recovery (MS/MSD)	Control Limits	Qualifier	Affected Samples
AZMW-6	Ethylbenzene Trichloroethene	108 %/127 % 118 %/125 %	77 % to 123 % 74 % to 123 %	UJ J	AZMW-6

Overall Data Assessment

Overall, the laboratory performed volatile organic analyses in accordance with the requirements specified in the methods listed in Section 1.2. These data were determined to be usable for qualitative and quantitative purposes as reported by the laboratory.

SECTION 3 - DATA USABILITY and PARCC EVALUATION

3.1 Data Usability

This section presents a summary of the usability of the analytical data and an evaluation of the PARCC parameters. Data usability was calculated as the percentage of data that was not qualified as rejected based on a significant deviation from established QA/QC criteria. Data usability which was calculated separately for each type of analysis is tabulated below.

Table 2: Data Usability and PARCC Evaluation - Data Usability

Parameter	Usability	Deviations
Volatile Organics	100 %	None resulting in the qualification of data

3.2 PARCC Evaluation

The following sections provide an evaluation of the analytical data with respect to the precision, accuracy, representativeness, comparability, and completeness (PARCC) parameters.

3.2.1 Precision

Precision is measured through field duplicate samples, split samples, and laboratory duplicate samples. For this sampling program, none of the data were qualified for laboratory duplicate criteria deviations and none of the data were qualified for field duplicate criteria deviations.

3.2.2 Accuracy

Matrix spike sample, surrogate recovery, internal standard recovery, laboratory control samples, and calibration criteria indicate the accuracy of the data. For this sampling program, 0.32 percent of the analytical data were qualified for deviations from matrix spike recovery criteria; none of the data were qualified for surrogate recovery criteria deviations; none of the data were qualified for internal standard recovery criteria deviations; none of the data were qualified for laboratory control sample deviations; and 9.14 percent of the data were qualified for calibration criteria deviations.

3.2.3 Representativeness

Holding times, sample preservation, and blank analysis are indicators of the representativeness of the analytical data. For this investigation, none of the analytical data required qualification for holding time deviations and none of the analytical data required qualification for blank analysis deviations.

3.2.4 Comparability

Comparability is not compromised provided that the analytical methods did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. These standards are compared to other unknowns to verify their concentrations. Since standard analytical methods and reporting procedures

were consistently used by the laboratory, the comparability criteria for the analytical data were met.

3.2.5 Completeness

The percent usability or completeness of the data was determined to be 100 percent.

APPENDIX A

DATA VALIDATION CHECKLISTS

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I.	Part A: SW-846 Method 8260B VOA Analyses	2

Data Validation Checklist - Part A: SW-846 Method 8260B VOA Analysis

No:	Parameter	YES	NO	N/A
1.0	**Traffic Reports and Laboratory Narrative**			
1.1	Are the traffic Report Forms present for all samples?	X		
1.2	Do the Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		X	
2.0	**Holding Times**			
2.1	Have any VOA technical holding times, determined from date of collection to date of analysis, been exceeded?		X	
3.0	**System Monitoring Compound (SMC) Recovery (Form II)**			
3.1	Are the VOA SMC Recovery Summaries (FORM II) present for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil			X
	c. Air			X
3.2	Are all the VOA samples listed on the appropriate System Monitoring Compound Recovery Summary for each of the following matrices:			
	a. Low Water	X		
	b. Low Soil			X
	c. Air			X
3.3	Were outliers marked correctly with an asterisk?			X
3.4	Was one or more VOA system monitoring compound recovery outside of contract specifications for any sample or method blank?		X	
	If yes, were samples re-analyzed?			X
	Were method blanks re-analyzed?			X
3.5	Are there any transcription/calculation errors between raw data and Form II?		X	
4.0	**Matrix Spikes (Form III)**			
4.1	Is the Matrix Spike/Matrix Spike Duplicate Recovery Form (Form III) present?	X		
4.2	Were matrix spikes analyzed at the required frequency for each of the following matrices?			
	a. Low Water	X		
	b. Low Soil			X
	c. Air			X
4.3	How many VOA spike recoveries are outside QC limits?			
	Water 0 out of 26 Soils 0 out of 0			
4.4	How many RPD's for matrix spike and matrix spike duplicate recoveries are outside QC limits?			

Data Validation Checklist - Part A: SW-846 Method 8260B VOA Analysis

No:	Parameter	YES	NO	N/A
	Water 1 out of 13 Soils 0 out of 0			
5.0	**Blanks (Form IV)**			
5.1	Is the Method Blank Summary (Form IV) present?	X		
5.2	Frequency of Analysis: for the analysis of VOA TCL compounds, has a reagent/method blank been analyzed for each SDG or every 20 samples of similar matrix (low water, low soil, medium soil), whichever is more frequent?	X		
5.3	Has a VOA method/instrument blank been analyzed at least once every twelve hours for each concentration level and GC/MS system used?	X		
5.4	Is the chromatographic performance (baseline stability) for each instrument acceptable for VOAs?	X		
6.0	**Contamination**			
6.1	Do any method/instrument/reagent blanks have positive results (TCL and/or TIC) for VOAs?		X	
6.2	Do any field/trip/rinse blanks have positive VOA results (TCL and/or TIC)?	X		
6.3	Are there field/rinse/equipment blanks associated with every sample?	X		
7.0	**GC/MS Instrument Performance Check (Form V)**			
7.1	Are the GC/MS Instrument Performance Check Forms (Form V) present for Bromofluorobenzene (BFB)?	X		
7.2	Are the enhanced bar graph spectrum and mass/charge (m/z) listing for the BFB provided for each twelve hour shift?	X		
7.3	Has an instrument performance compound been analyzed for every twelve hours of sample analysis per instrument?	X		
7.4	Have the ion abundances been normalized to m/z 95?	X		
7.5	Have the ion abundance criteria been met for each instrument used?	X		
7.6	Are there any transcription/calculation errors between mass lists and Form V's?		X	
7.7	Have the appropriate number of significant figures (two) been reported?	X		
7.8	Are the spectra of the mass calibration compound acceptable?	X		
8.0	**Target Compound List (TCL) Analytes**			
8.1	Are the Organic Analysis Data Sheets (Form I VOA) present with required header information on each page, for each of the following:			
	a. Sample and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates?	X		
	c. Blanks?	X		
8.2	Are the VOA Reconstructed Ion Chromatograms, the mass spectra for the identified compounds, and the data system printouts (Quant Reports) included in the sample package for each of the following?			
	a. Samples and/or fractions as appropriate?	X		
	b. Matrix spikes and matrix spike duplicates (Mass spectra not required)?	X		
	c. Blanks?	X		

Data Validation Checklist - Part A: SW-846 Method 8260B VOA Analysis

No:	Parameter	YES	NO	N/A
8.3	Are the response factors shown in the Quant Report?	X		
8.4	Is the chromatographic performance acceptable with respect to:			
	Baseline stability?	X		
	Resolution?	X		
	Peak shape?	X		
	Full-scale graph (attenuation)?	X		
	Other:			
8.5	Are the lab-generated standard mass spectra of the identified VOA compounds present for each sample?	X		
8.6	Is the RRT of each reported compound within 0.06 RRT units of the standard RRT in the continuing calibration?	X		
8.7	Are all ions in the standard mass spectrum at a relative intensity greater than 10% also present in the sample mass spectrum?	X		
8.8	Do sample and standard relative ion intensities agree within 20%?	X		
9.0	**Tentatively Identified Compounds (TIC)**			
9.1	Are all Tentatively Identified Compound Forms (Form I Part B) present; and do listed TICs include scan number or retention time, estimated concentration and "JN" qualifier?	X		
9.2	Are the mass spectra for the tentatively identified compounds and associated "best match" spectra included in the sample package for each of the following:			
	a. Samples and/or fractions as appropriate?			X
	b. Blanks?			X
9.3	Are any TCL compounds (from any fraction) listed as TIC compounds?			X
9.4	Are all ions present in the reference mass spectrum with a relative intensity greater than 10% also present in the sample mass spectrum?			X
9.5	Do TIC and "best match" standard relative ion intensities agree within 20%?			X
10.0	**Compound Quantitation and Reported Detection Limits**			
10.1	Are there any transcription/calculation errors in Form I results?		X	
10.2	Are the CRQLs adjusted to reflect sample dilutions and, for soils, sample moisture?	X		
11.0	**Standards Data (GC/MS)**			
11.1	Are the Reconstructed Ion Chromatograms, and data system printouts present for initial and continuing calibration?	X		
12.0	**GC/MS Initial Calibration (Form VI)**			
12.1	Are the Initial Calibration Forms (Form VI) present and complete for the volatile fraction at concentrations of 10, 20, 50, 100, 200 ug/L? Are there separate calibrations for low/med soils and low soil samples?	X		
12.2	Were all low level soil standards, blanks, and samples analyzed by heated purge?			X
12.3	Are the response factors stable for VOA's over the concentration range of the calibration (%Relative Standard Deviation (%RSD) <30%)	X		

Data Validation Checklist - Part A: SW-846 Method 8260B VOA Analysis

No:	Parameter	YES	NO	N/A
12.4	Are the RRFs above 0.01?	X		
12.5	Are there any transcription/calculation errors in the reporting of average response factors (RRF) or %RSD?		X	
13.0	**GC/MS Continuing Calibration (Form VII)**			
13.1	Are the Continuing Calibration Forms (Form VII) present and complete for the volatile fraction?	X		
13.2	Has a continuing calibration standard been analyzed for every twelve hours of sample analysis per instrument?	X		
13.3	Do any volatile compounds have a %Difference (%D) between the initial and continuing RRF which exceeds the +/- 25% criteria?		X	
13.4	Do any volatile compounds have a RRF <0.01?		X	
13.5	Are there any transcription/calculation errors in the reporting of average response factor (RRF) or %difference (%D) between initial and continuing RRFs?		X	
14.0	**Internal Standard (Form VIII)**			
14.1	Are the internal standard areas (Form VIII) of every sample and blank within the upper and lower limits (-50% to +100%) for each continuing calibration?	X		
14.2	Are the retention times of the internal standards within 30 seconds of the associated calibration standard?	X		
15.0	**Field Duplicates**			
15.1	Were any field duplicates submitted for VOA analysis?	X		