

To:
Mr. Glenn May
New York State Department of
Environmental Conservation
Division of Environmental Remediation
Region 9
270 Michigan Avenue
Buffalo, New York 14203

Copies:
D. Morrison, BMS
J. Alonzo, demaximis
T. Alexander, NFG

ARCADIS U.S., Inc.
6723 Towpath Road
P O Box 66
Syracuse
New York 13214-0066
Tel 315 446 9120
Fax 315 449 0017

From:
Vin Maresco

Date:
October 27, 2015

ARCADIS Project No.:
B0087370.0001

Subject:
August 2015 Groundwater Sampling
Former Iroquois Gas/Westwood Pharmaceuticals Site
100 Forest Avenue, Buffalo, NY (Site)

This memorandum and supporting attachments summarizes the findings from a periodic groundwater sampling event completed on August 24 and 25, 2015 at the Site. The groundwater sampling event included recording liquid level measurements and collecting groundwater samples from accessible monitoring wells, for benzene, toluene, ethylbenzene, and xylenes (BTEX) analysis via United States Environmental Protection Agency (USEPA) Method Number 8260C. The most recent previous sampling event was conducted in December 2012. The current groundwater sampling event was conducted in accordance with a verbal request made by the New York State Department of Environmental Conservation (NYSDEC) on August 4, 2015 to Vin Maresco of Arcadis.

Sampling Methodology

Site monitoring consisted of gauging recovery wells EW3 through EW8, piezometers P1 through P9, Scajaquada Creek and accessible monitoring wells. The gauging activities occurred on August 24, 2015 while the system was active. A water level meter was used to measure groundwater levels with an accuracy of approximately 0.01 feet. The groundwater gauging data was used to construct a groundwater contour map (Figure 1) which was reviewed against historic data.

The following monitoring well locations were scheduled to be sampled: B3, B6, B7, B8, MWF2, MWF3, MWS2, MWF4, P5 and PS1. At the time of the sampling event three of these target wells were not sampled as follows: MWF3 and MWS2 were not found, and B3 had been damaged and could not be sampled. The remaining monitoring wells were purged and sampled utilizing disposable bailers and a three volume purge technique. Groundwater sampling activities occurred on August 24 and August 25, 2015. Purge water and equipment rinse water was containerized and then treated in the on-site water treatment plant. Following collection, all samples were packed on ice and submitted to TestAmerica, Inc. (TestAmerica) of Amherst, New York in accordance with chain-of-custody procedures. Groundwater samples were analyzed for BTEX via USEPA Method 8260C and sample pH was measured.

Monitoring Summary and Findings

Based on groundwater elevation data, groundwater flow direction for the site is primarily to the west, towards Scajaquada Creek. A Groundwater Elevation Contour Map representing data from the August 24, 2015 gauging event is provided as Figure 1. A table summarizing the groundwater elevation data is provided in Attachment A.

Analytical data for the August 2015 sampling event indicates that BTEX concentrations have remained relatively stable. Groundwater analytical data is shown on Figure 2 and summarized for the past four events in Attachment B. The complete laboratory report for this sampling event is included in Attachment C.

Total BTEX concentrations ranged from non-detect at B6, B7, and PS1 to 1,739.4 ug/l at MWF2. Samples collected from monitoring wells B8, MWF2, MWF4 and P5 exhibited benzene, ethylbenzene, and xylenes at concentrations greater than NYSDEC ambient water quality standards and guidance values presented in NYSDEC Technical and Operational Guidance Series (TOGS) 1.1.1. Results of the August 2015 analytical results are generally consistent with the results of the previous sampling event, completed in December 2012.

If there are any questions regarding this memo, please contact Vin Maresco (Arcadis) at 315-671-9256.

Enclosures:

Figure 1 – Groundwater Elevation Contour Map

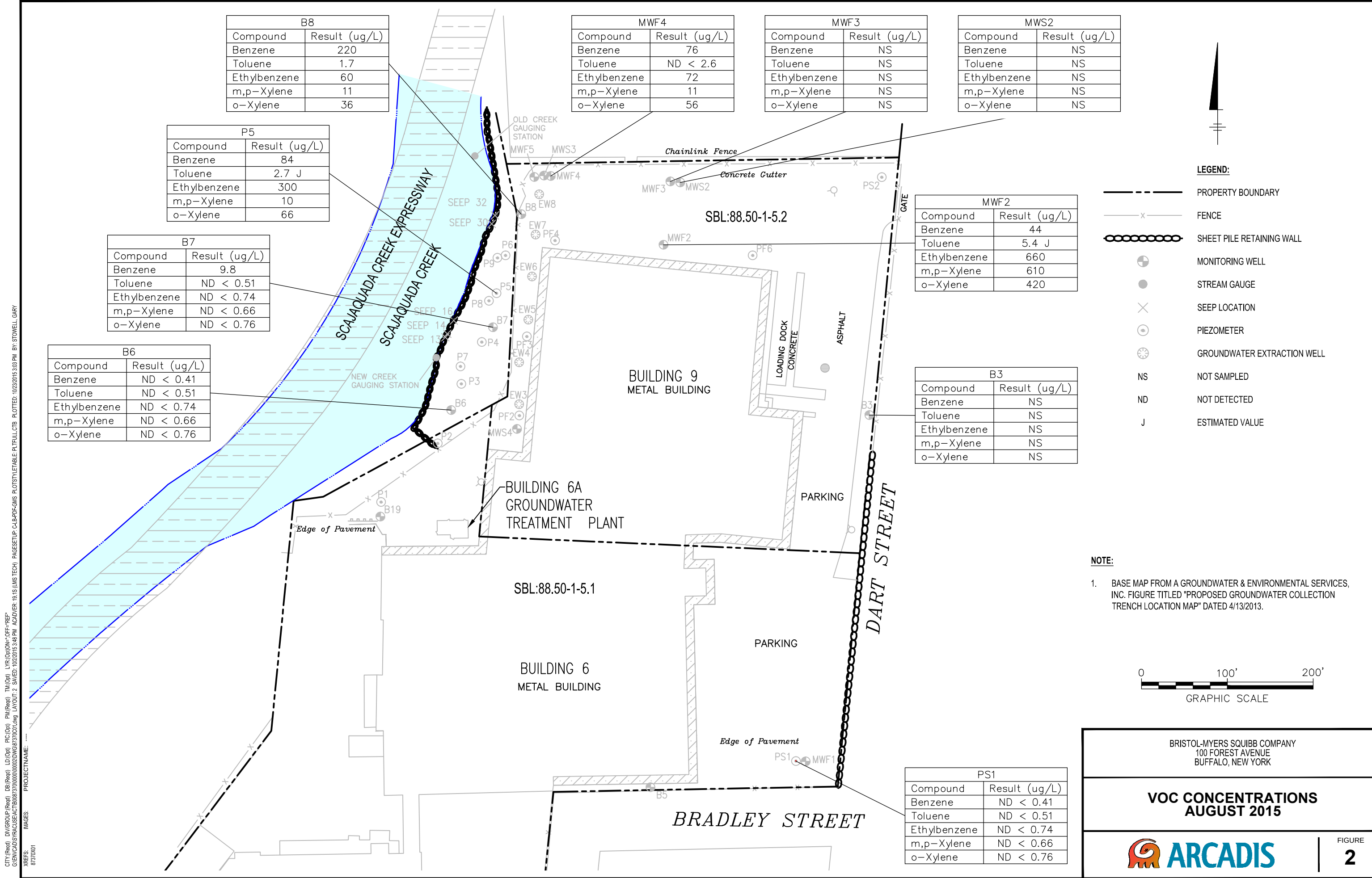
Figure 2 – Volatile Organic Compound (VOCs) Concentration Map

Attachment A – August 2015 Groundwater Measurements

Attachment B – Groundwater Analytical Data

Attachment C – Complete Laboratory Analytical Report

Figures



B8	
Compound	Result (ug/L)
Benzene	220
Toluene	1.7
Ethylbenzene	60
m,p-Xylene	11
o-Xylene	36

MWF4	
Compound	Result (ug/L)
Benzene	76
Toluene	ND < 2.6
Ethylbenzene	72
m,p-Xylene	11
o-Xylene	56

MWF3	
Compound	Result (ug/L)
Benzene	NS
Toluene	NS
Ethylbenzene	NS
m,p-Xylene	NS
o-Xylene	NS

MWS2	
Compound	Result (ug/L)
Benzene	NS
Toluene	NS
Ethylbenzene	NS
m,p-Xylene	NS
o-Xylene	NS

P5	
Compound	Result (ug/L)
Benzene	84
Toluene	2.7 J
Ethylbenzene	300
m,p-Xylene	10
o-Xylene	66

MWF2	
Compound	Result (ug/L)
Benzene	44
Toluene	5.4 J
Ethylbenzene	660
m,p-Xylene	610
o-Xylene	420

B7	
Compound	Result (ug/L)
Benzene	9.8
Toluene	ND < 0.51
Ethylbenzene	ND < 0.74
m,p-Xylene	ND < 0.66
o-Xylene	ND < 0.76

B3	
Compound	Result (ug/L)
Benzene	NS
Toluene	NS
Ethylbenzene	NS
m,p-Xylene	NS
o-Xylene	NS

B6	
Compound	Result (ug/L)
Benzene	ND < 0.41
Toluene	ND < 0.51
Ethylbenzene	ND < 0.74
m,p-Xylene	ND < 0.66
o-Xylene	ND < 0.76

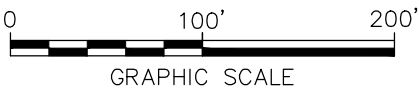
PS1	
Compound	Result (ug/L)
Benzene	ND < 0.41
Toluene	ND < 0.51
Ethylbenzene	ND < 0.74
m,p-Xylene	ND < 0.66
o-Xylene	ND < 0.76

LEGEND:

- PROPERTY BOUNDARY
- FENCE
- SHEET PILE RETAINING WALL
- MONITORING WELL
- STREAM GAUGE
- SEEP LOCATION
- PIEZOMETER
- GROUNDWATER EXTRACTION WELL
- NS NOT SAMPLED
- ND NOT DETECTED
- J ESTIMATED VALUE

NOTE:

- BASE MAP FROM A GROUNDWATER & ENVIRONMENTAL SERVICES, INC. FIGURE TITLED "PROPOSED GROUNDWATER COLLECTION TRENCH LOCATION MAP" DATED 4/13/2013.



BRISTOL-MYERS SQUIBB COMPANY
100 FOREST AVENUE
BUFFALO, NEW YORK

VOC CONCENTRATIONS
AUGUST 2015





Attachment A

Attachment A
August 2015 Groundwater Measurement
Bristol-Myers Squibb Company
Former Iroquois Gas/Westwood Pharmaceutical Site
100 Forest Ave, Buffalo, NY

Groundwater Elevation Data			
Well ID	Reference Elevation (ft. amsl)	8/24/2015	
		DTW	GWE
B19	592.14	10.08	582.06
B3	590.74	CNM - damaged	-
B6	592.30	18.51	573.79
B7	591.86	19.79	572.07
B8	592.16	18.41	573.75
EW3	592.86	20.37	572.49
EW4	590.78	23.61	567.17
EW5	590.69	23.4	567.29
EW6	590.33	22.92	567.41
EW7	590.31	21.88	568.43
EW8	591.07	23.89	567.18
MWF1	592.28	7.22	585.06
MWF2	594.66	8.97	585.69
MWF3	591.66	CNF	-
MWF4	594.47	15.51	578.96
MWF5	590.95	14.79	576.16
MWS2	591.89	CNF	-
MWS3	591.57	10.18	581.39
MWS4	593.05	11.58	581.47
P1	590.77	14.89	575.88
P2	591.30	17.37	573.93
P3	591.09	20.07	571.02
P4	591.51	20.82	570.69
P5	591.42	18.15	573.27
P6	590.83	19.71	571.12
P7	591.01	20.13	570.88
P8	591.51	20.83	570.68
P9	591.32	20.74	570.58
PF2	591.84	10.21	581.63
PF3	591.48	14.48	577.00
PF4	591.48	19.9	571.58
PF6	592.86	6.75	586.11
PS1	592.89	10.03	582.86
PS2	593.40	12.37	581.03
Creek	576.10	7.25	568.85

CNM - Could not measure, damaged

CNF - Could not find

DTW- Depth to water, Ft

GWE - Groundwater Elevation, Ft

ARCADIS

Attachment B

Groundwater Analytical Data								
	Date	Depth to Water (ft)	pH	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	m-, p- Xylene (µg/L)	o-Xylene (µg/L)
NYSDEC TOGS 1.1.1 Standards				1	5	5	5	5
B3	12/13/2011	9.75	7.52	ND<0.20	ND<0.20	ND<0.20	ND<0.40	ND<0.20
	6/28/2012	8.46	7.50	ND<0.20	ND<0.20	ND<0.20	ND<0.40	ND<0.20
	12/11/2012	10.01	7.49	0.099	2.1	0.70	2.7	1.0
	8/24/2015	NM	NS	NS	NS	NS	NS	NS
B6	12/13/2011	18.21	7.83	0.11	0.067	ND<0.20	ND<0.40	ND<0.20
	6/28/2012	18.59	7.98	0.22	ND<0.20	ND<0.20	ND<0.40	ND<0.20
	12/11/2012	18.00	7.88	0.043	0.22	0.064	0.29	0.068
	8/24/2015	18.51	7.59	ND<0.41	ND<0.51	ND<0.74	ND<0.66	ND<0.76
B7	12/13/2011	19.52	7.89	0.12	ND<0.20	ND<0.20	ND<0.40	ND<0.20
	6/28/2012	20.42	7.85	4.7	0.068	0.079	ND<0.40	0.11
	12/11/2012	19.16	7.74	3.9	0.42	0.13	0.36	0.17
	8/25/2015	19.79	6.93	9.8	ND<0.51	ND<0.74	ND<0.66	ND<0.76
B8	12/13/2011	18.11	7.45	100	1	50	9.3	17
	6/28/2012	18.72	7.82	150	1.4	77	6.2	27
	12/11/2012	18.03	7.74	51	1.3	23	5.4	13
	8/25/2015	18.41	7.30	220	1.7	60	11	36
MWF2	12/13/2011	9.74	6.82	81	7.3	420	420	290
	6/28/2012	9.45	6.97	36	4.5	730	570	380
	12/11/2012	8.90	6.90	390	19	800	730	470
	8/25/2015	8.97	6.48	44	5.4 J	660	610	420
MWF3	12/13/2011	4.92	7.22	ND<0.20	ND<0.20	ND<0.20	ND<0.40	ND<0.20
	6/28/2012	6.00	6.86	0.37	ND<0.20	ND<0.20	0.13	1.1
	12/11/2012	4.80	6.81	0.26	0.35	1.6	2.0	1.5
	8/24/2015	NM	NS	NS	NS	NS	NS	NS
MWF4	12/13/2011	16.47	7.78	64	2.1	84	16	54
	6/28/2012	15.96	7.77	90	2.9	120	19	73
	12/11/2012	15.45	7.75	100	4.2	200	38	99
	8/25/2015	15.51	7.48	76	ND<2.6	72	11	56
MWS2	8/24/2015	NM	NS	NS	NS	NS	NS	NS
PS1	12/13/2011	11.02	7.63	ND<0.20	ND<0.20	ND<0.20	ND<0.40	ND<0.20
	6/28/2012	11.57	7.62	ND<0.20	ND<0.20	ND<0.20	ND<0.40	ND<0.20
	12/11/2012	11.37	7.63	0.078	0.10	0.075	ND<0.40	ND<0.20
	8/25/2015	10.03	7.14	ND<0.41	ND<0.51	ND<0.74	ND<0.66	ND<0.76
P5	8/25/2015	18.15	6.87	84	2.7 J	300	10	66

Notes:

ft = feet

µg/L = micrograms per liter

ND = non detect (value shown is the method detection limit)

J = result is less than the Reporting Limit but less than the Method Detection Limit and the concentration is an estimated value

NS = not sampled

NM = not measured

TOGS = Technical and Operational Guidance Services

ARCADIS

Attachment C

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: 480-86165-1

Client Project/Site: Iroquois Gas/Westwood Pharm.

Revision: 1

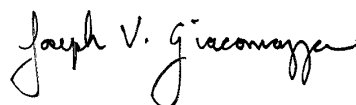
For:

ARCADIS U.S. Inc

6723 Towpath Road

Syracuse, New York 13214

Attn: Mr. Victor Finocchiaro



Authorized for release by:

10/2/2015 4:25:13 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

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	7
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	13
Lab Chronicle	14
Certification Summary	16
Method Summary	17
Sample Summary	18
Chain of Custody	19
Receipt Checklists	20



Definitions/Glossary

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Qualifiers

GC/MS VOA

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

Glossary

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

Case Narrative

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Job ID: 480-86165-1

Laboratory: TestAmerica Buffalo

Narrative

Job Narrative 480-86165-1

Revision I

Report was revised to remove a document not pertaining to this job 480-86165

Receipt

The samples were received on 8/25/2015 2:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.7° C.

GC/MS VOA

Method(s) 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-F2 (480-86165-3) and P-5 (480-86165-7). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: MW-F4 (480-86165-4). Elevated reporting limits (RLs) are provided.

Method(s) 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: B-8 (480-86165-5). Elevated reporting limits (RLs) are provided.

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

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Client Sample ID: B-6

Lab Sample ID: 480-86165-1

No Detections.

Client Sample ID: PS-1

Lab Sample ID: 480-86165-2

No Detections.

Client Sample ID: MW-F2

Lab Sample ID: 480-86165-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	44		10	4.1	ug/L	10		8260C	Total/NA
Toluene	5.4	J	10	5.1	ug/L	10		8260C	Total/NA
Ethylbenzene	660		10	7.4	ug/L	10		8260C	Total/NA
m-Xylene & p-Xylene	610		20	6.6	ug/L	10		8260C	Total/NA
o-Xylene	420		10	7.6	ug/L	10		8260C	Total/NA
Xylenes, Total	1000		20	6.6	ug/L	10		8260C	Total/NA
Total BTEX	1700		20	10	ug/L	10		8260C	Total/NA

Client Sample ID: MW-F4

Lab Sample ID: 480-86165-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	76		5.0	2.1	ug/L	5		8260C	Total/NA
Ethylbenzene	72		5.0	3.7	ug/L	5		8260C	Total/NA
m-Xylene & p-Xylene	11		10	3.3	ug/L	5		8260C	Total/NA
o-Xylene	56		5.0	3.8	ug/L	5		8260C	Total/NA
Xylenes, Total	67		10	3.3	ug/L	5		8260C	Total/NA
Total BTEX	220		10	5.0	ug/L	5		8260C	Total/NA

Client Sample ID: B-8

Lab Sample ID: 480-86165-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	1.7		1.0	0.51	ug/L	1		8260C	Total/NA
Ethylbenzene	60		1.0	0.74	ug/L	1		8260C	Total/NA
m-Xylene & p-Xylene	11		2.0	0.66	ug/L	1		8260C	Total/NA
o-Xylene	36		1.0	0.76	ug/L	1		8260C	Total/NA
Xylenes, Total	47		2.0	0.66	ug/L	1		8260C	Total/NA
Benzene - DL	220		4.0	1.6	ug/L	4		8260C	Total/NA
Total BTEX - DL	320		8.0	4.0	ug/L	4		8260C	Total/NA

Client Sample ID: B-7

Lab Sample ID: 480-86165-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.8		1.0	0.41	ug/L	1		8260C	Total/NA
Total BTEX	9.8		2.0	1.0	ug/L	1		8260C	Total/NA

Client Sample ID: P-5

Lab Sample ID: 480-86165-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	84		5.0	2.1	ug/L	5		8260C	Total/NA
Toluene	2.7	J	5.0	2.6	ug/L	5		8260C	Total/NA
Ethylbenzene	300		5.0	3.7	ug/L	5		8260C	Total/NA
m-Xylene & p-Xylene	10		10	3.3	ug/L	5		8260C	Total/NA
o-Xylene	66		5.0	3.8	ug/L	5		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Detection Summary

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Client Sample ID: P-5 (Continued)

Lab Sample ID: 480-86165-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Xylenes, Total	76		10	3.3	ug/L	5		8260C	Total/NA
Total BTEX	460		10	5.0	ug/L	5		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Buffalo

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Client Sample ID: B-6

Date Collected: 08/24/15 15:00

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-1

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			08/27/15 02:00	1
Toluene	ND		1.0	0.51	ug/L			08/27/15 02:00	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/27/15 02:00	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			08/27/15 02:00	1
o-Xylene	ND		1.0	0.76	ug/L			08/27/15 02:00	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/27/15 02:00	1
Total BTEX	ND		2.0	1.0	ug/L			08/27/15 02:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		71 - 126		08/27/15 02:00	1
1,2-Dichloroethane-d4 (Surr)	101		66 - 137		08/27/15 02:00	1
4-Bromofluorobenzene (Surr)	114		73 - 120		08/27/15 02:00	1
Dibromofluoromethane (Surr)	108		60 - 140		08/27/15 02:00	1

Client Sample ID: PS-1

Date Collected: 08/25/15 12:15

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			08/27/15 02:22	1
Toluene	ND		1.0	0.51	ug/L			08/27/15 02:22	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/27/15 02:22	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			08/27/15 02:22	1
o-Xylene	ND		1.0	0.76	ug/L			08/27/15 02:22	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/27/15 02:22	1
Total BTEX	ND		2.0	1.0	ug/L			08/27/15 02:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		71 - 126		08/27/15 02:22	1
1,2-Dichloroethane-d4 (Surr)	102		66 - 137		08/27/15 02:22	1
4-Bromofluorobenzene (Surr)	113		73 - 120		08/27/15 02:22	1
Dibromofluoromethane (Surr)	108		60 - 140		08/27/15 02:22	1

Client Sample ID: MW-F2

Date Collected: 08/25/15 12:25

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	44		10	4.1	ug/L			08/27/15 02:44	10
Toluene	5.4	J	10	5.1	ug/L			08/27/15 02:44	10
Ethylbenzene	660		10	7.4	ug/L			08/27/15 02:44	10
m-Xylene & p-Xylene	610		20	6.6	ug/L			08/27/15 02:44	10
o-Xylene	420		10	7.6	ug/L			08/27/15 02:44	10
Xylenes, Total	1000		20	6.6	ug/L			08/27/15 02:44	10
Total BTEX	1700		20	10	ug/L			08/27/15 02:44	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		71 - 126		08/27/15 02:44	10

TestAmerica Buffalo

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Client Sample ID: MW-F2

Date Collected: 08/25/15 12:25

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-3

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		66 - 137		08/27/15 02:44	10
4-Bromofluorobenzene (Surr)	118		73 - 120		08/27/15 02:44	10
Dibromofluoromethane (Surr)	108		60 - 140		08/27/15 02:44	10

Client Sample ID: MW-F4

Date Collected: 08/25/15 12:35

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	76		5.0	2.1	ug/L			08/27/15 03:06	5
Toluene	ND		5.0	2.6	ug/L			08/27/15 03:06	5
Ethylbenzene	72		5.0	3.7	ug/L			08/27/15 03:06	5
m-Xylene & p-Xylene	11		10	3.3	ug/L			08/27/15 03:06	5
o-Xylene	56		5.0	3.8	ug/L			08/27/15 03:06	5
Xylenes, Total	67		10	3.3	ug/L			08/27/15 03:06	5
Total BTEX	220		10	5.0	ug/L			08/27/15 03:06	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		71 - 126		08/27/15 03:06	5
1,2-Dichloroethane-d4 (Surr)	96		66 - 137		08/27/15 03:06	5
4-Bromofluorobenzene (Surr)	115		73 - 120		08/27/15 03:06	5
Dibromofluoromethane (Surr)	106		60 - 140		08/27/15 03:06	5

Client Sample ID: B-8

Date Collected: 08/25/15 12:45

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	1.7		1.0	0.51	ug/L			08/27/15 03:28	1
Ethylbenzene	60		1.0	0.74	ug/L			08/27/15 03:28	1
m-Xylene & p-Xylene	11		2.0	0.66	ug/L			08/27/15 03:28	1
o-Xylene	36		1.0	0.76	ug/L			08/27/15 03:28	1
Xylenes, Total	47		2.0	0.66	ug/L			08/27/15 03:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		71 - 126		08/27/15 03:28	1
1,2-Dichloroethane-d4 (Surr)	97		66 - 137		08/27/15 03:28	1
4-Bromofluorobenzene (Surr)	117		73 - 120		08/27/15 03:28	1
Dibromofluoromethane (Surr)	108		60 - 140		08/27/15 03:28	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	220		4.0	1.6	ug/L			08/27/15 14:21	4
Total BTEX	320		8.0	4.0	ug/L			08/27/15 14:21	4

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		71 - 126		08/27/15 14:21	4
1,2-Dichloroethane-d4 (Surr)	101		66 - 137		08/27/15 14:21	4

TestAmerica Buffalo

Client Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Client Sample ID: B-8

Date Collected: 08/25/15 12:45

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-5

Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		73 - 120		08/27/15 14:21	4
Dibromofluoromethane (Surr)	106		60 - 140		08/27/15 14:21	4

Client Sample ID: B-7

Date Collected: 08/25/15 12:55

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	9.8		1.0	0.41	ug/L			08/27/15 03:51	1
Toluene	ND		1.0	0.51	ug/L			08/27/15 03:51	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/27/15 03:51	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			08/27/15 03:51	1
o-Xylene	ND		1.0	0.76	ug/L			08/27/15 03:51	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/27/15 03:51	1
Total BTEX	9.8		2.0	1.0	ug/L			08/27/15 03:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		71 - 126		08/27/15 03:51	1
1,2-Dichloroethane-d4 (Surr)	101		66 - 137		08/27/15 03:51	1
4-Bromofluorobenzene (Surr)	119		73 - 120		08/27/15 03:51	1
Dibromofluoromethane (Surr)	109		60 - 140		08/27/15 03:51	1

Client Sample ID: P-5

Date Collected: 08/25/15 13:05

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-7

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	84		5.0	2.1	ug/L			08/27/15 04:13	5
Toluene	2.7	J	5.0	2.6	ug/L			08/27/15 04:13	5
Ethylbenzene	300		5.0	3.7	ug/L			08/27/15 04:13	5
m-Xylene & p-Xylene	10		10	3.3	ug/L			08/27/15 04:13	5
o-Xylene	66		5.0	3.8	ug/L			08/27/15 04:13	5
Xylenes, Total	76		10	3.3	ug/L			08/27/15 04:13	5
Total BTEX	460		10	5.0	ug/L			08/27/15 04:13	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		71 - 126		08/27/15 04:13	5
1,2-Dichloroethane-d4 (Surr)	101		66 - 137		08/27/15 04:13	5
4-Bromofluorobenzene (Surr)	118		73 - 120		08/27/15 04:13	5
Dibromofluoromethane (Surr)	109		60 - 140		08/27/15 04:13	5

TestAmerica Buffalo

Surrogate Summary

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (71-126)	12DCE (66-137)	BFB (73-120)	DBFM (60-140)
480-86165-1	B-6	105	101	114	108
480-86165-2	PS-1	103	102	113	108
480-86165-3	MW-F2	105	104	118	108
480-86165-4	MW-F4	106	96	115	106
480-86165-5	B-8	106	97	117	108
480-86165-5 - DL	B-8	107	101	116	106
480-86165-6	B-7	109	101	119	109
480-86165-7	P-5	108	101	118	109
LCS 480-260618/4	Lab Control Sample	108	104	119	114
LCS 480-260694/38	Lab Control Sample	108	104	117	115
MB 480-260618/6	Method Blank	106	100	115	108
MB 480-260694/7	Method Blank	108	101	115	104

Surrogate Legend

TOL = Toluene-d8 (Surr)

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

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

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

Lab Sample ID: MB 480-260618/6

Matrix: Water

Analysis Batch: 260618

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			08/26/15 21:32	1
Toluene	ND		1.0	0.51	ug/L			08/26/15 21:32	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/26/15 21:32	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			08/26/15 21:32	1
o-Xylene	ND		1.0	0.76	ug/L			08/26/15 21:32	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/26/15 21:32	1
Total BTEX	ND		2.0	1.0	ug/L			08/26/15 21:32	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		71 - 126		08/26/15 21:32	1
1,2-Dichloroethane-d4 (Surr)	100		66 - 137		08/26/15 21:32	1
4-Bromofluorobenzene (Surr)	115		73 - 120		08/26/15 21:32	1
Dibromofluoromethane (Surr)	108		60 - 140		08/26/15 21:32	1

Lab Sample ID: LCS 480-260618/4

Matrix: Water

Analysis Batch: 260618

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	25.5		ug/L		102	71 - 124
Toluene	25.0	24.8		ug/L		99	80 - 122
Ethylbenzene	25.0	25.4		ug/L		101	77 - 123
m-Xylene & p-Xylene	25.0	25.3		ug/L		101	76 - 122
o-Xylene	25.0	26.4		ug/L		106	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	108		71 - 126
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
4-Bromofluorobenzene (Surr)	119		73 - 120
Dibromofluoromethane (Surr)	114		60 - 140

Lab Sample ID: MB 480-260694/7

Matrix: Water

Analysis Batch: 260694

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.41	ug/L			08/27/15 12:41	1
Toluene	ND		1.0	0.51	ug/L			08/27/15 12:41	1
Ethylbenzene	ND		1.0	0.74	ug/L			08/27/15 12:41	1
m-Xylene & p-Xylene	ND		2.0	0.66	ug/L			08/27/15 12:41	1
o-Xylene	ND		1.0	0.76	ug/L			08/27/15 12:41	1
Xylenes, Total	ND		2.0	0.66	ug/L			08/27/15 12:41	1
Total BTEX	ND		2.0	1.0	ug/L			08/27/15 12:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		71 - 126		08/27/15 12:41	1
1,2-Dichloroethane-d4 (Surr)	101		66 - 137		08/27/15 12:41	1

TestAmerica Buffalo

QC Sample Results

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

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

Lab Sample ID: MB 480-260694/7

Matrix: Water

Analysis Batch: 260694

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		73 - 120		08/27/15 12:41	1
Dibromofluoromethane (Surr)	104		60 - 140		08/27/15 12:41	1

Lab Sample ID: LCS 480-260694/38

Matrix: Water

Analysis Batch: 260694

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	27.0		ug/L		108	71 - 124
Toluene	25.0	26.0		ug/L		104	80 - 122
Ethylbenzene	25.0	26.5		ug/L		106	77 - 123
m-Xylene & p-Xylene	25.0	26.9		ug/L		108	76 - 122
o-Xylene	25.0	27.1		ug/L		109	76 - 122

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	108		71 - 126
1,2-Dichloroethane-d4 (Surr)	104		66 - 137
4-Bromofluorobenzene (Surr)	117		73 - 120
Dibromofluoromethane (Surr)	115		60 - 140

QC Association Summary

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

GC/MS VOA

Analysis Batch: 260618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86165-1	B-6	Total/NA	Water	8260C	
480-86165-2	PS-1	Total/NA	Water	8260C	
480-86165-3	MW-F2	Total/NA	Water	8260C	
480-86165-4	MW-F4	Total/NA	Water	8260C	
480-86165-5	B-8	Total/NA	Water	8260C	
480-86165-6	B-7	Total/NA	Water	8260C	
480-86165-7	P-5	Total/NA	Water	8260C	
LCS 480-260618/4	Lab Control Sample	Total/NA	Water	8260C	
MB 480-260618/6	Method Blank	Total/NA	Water	8260C	

Analysis Batch: 260694

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-86165-5 - DL	B-8	Total/NA	Water	8260C	
LCS 480-260694/38	Lab Control Sample	Total/NA	Water	8260C	
MB 480-260694/7	Method Blank	Total/NA	Water	8260C	

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Client Sample ID: B-6

Date Collected: 08/24/15 15:00

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	260618	08/27/15 02:00	LJF	TAL BUF

Client Sample ID: PS-1

Date Collected: 08/25/15 12:15

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	260618	08/27/15 02:22	LJF	TAL BUF

Client Sample ID: MW-F2

Date Collected: 08/25/15 12:25

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		10	260618	08/27/15 02:44	LJF	TAL BUF

Client Sample ID: MW-F4

Date Collected: 08/25/15 12:35

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	260618	08/27/15 03:06	LJF	TAL BUF

Client Sample ID: B-8

Date Collected: 08/25/15 12:45

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	260618	08/27/15 03:28	LJF	TAL BUF
Total/NA	Analysis	8260C	DL	4	260694	08/27/15 14:21	SWO	TAL BUF

Client Sample ID: B-7

Date Collected: 08/25/15 12:55

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	260618	08/27/15 03:51	LJF	TAL BUF

TestAmerica Buffalo

Lab Chronicle

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Client Sample ID: P-5

Date Collected: 08/25/15 13:05

Date Received: 08/25/15 14:20

Lab Sample ID: 480-86165-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		5	260618	08/27/15 04:13	LJF	TAL BUF

Laboratory References:

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

Certification Summary

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Laboratory: TestAmerica Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
New York	NELAP	2	10026	03-31-16

The following analytes are included in this report, but certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8260C		Water	Total BTEX

Method Summary

Client: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

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: ARCADIS U.S. Inc
Project/Site: Iroquois Gas/Westwood Pharm.

TestAmerica Job ID: 480-86165-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-86165-1	B-6	Water	08/24/15 15:00	08/25/15 14:20
480-86165-2	PS-1	Water	08/25/15 12:15	08/25/15 14:20
480-86165-3	MW-F2	Water	08/25/15 12:25	08/25/15 14:20
480-86165-4	MW-F4	Water	08/25/15 12:35	08/25/15 14:20
480-86165-5	B-8	Water	08/25/15 12:45	08/25/15 14:20
480-86165-6	B-7	Water	08/25/15 12:55	08/25/15 14:20
480-86165-7	P-5	Water	08/25/15 13:05	08/25/15 14:20

Chain of Custody Record

Client Information		Lab PM:		Carrier Tracking No(s):		COC No:			
Mr. Shawn Skelly		Stone, Judy L				480-71302-18120.1			
Company: ARCADIS U.S. Inc		E-Mail: judy.stone@testamericainc.com				Page: Page 1 of 2			
Address: Arcadis 295 Woodcliff Drive #2, 3rd Floor, Suite 301		City: Fairport		Analysis Requested		Job #:			
State, Zip: NY, 14450		TAT Requested (days):				Preservation Codes:			
Phone: 585-662-4042(Tel) 585-385-4198(Fax)		PO #:				A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - Di Water V - MCAA K - EDTA L - EDA W - ph 4-5 Z - other (specify) Other:			
Email: shawn.skelly@arcadis-us.com		WO #:				Total Number of containers			
Project Name: Iroquois Gas/Westwood Pharm. Monthly		Project #:				Special Instructions/Note:			
Site:		SSOW#:							
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastewater, B=biological, A=air)	Field Filtered Sample (Yes or No)	8260C - BTEX - 8260	8260C - (MOD) BTEX - 8260	Moisture - Local Method	8016D_DAI - (MOD) Local Method
B-6	08/14/15	1500	G	Water	X	X			
P-1	08/15/15	1215	G	Water	X	X			
MW-F2		1225	G	Water	X	X			
MW-F4		1235	G	Water	X	X			
B-8		1245	G	Water	X	X			
B-7		1255	G	Water	X	X			
P-5		1305	G	Water	X	X			
				Water					
				Water					
				Water					
				Water					



480-86165 Chain of Custody

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
☒ Non-Hazard	☐ Flammable	☐ Return To Client	☒ Disposal By Lab
Deliverable Requested: I, II, III, IV, Other (specify)		Archive For _____ Months	
Empty Kit Relinquished by: 		Special Instructions/QC Requirements:	
Relinquished by: 		Method of Shipment:	
Relinquished by: 		Time:	
Relinquished by: 		Date:	
Custody Seal No.: 		Date/Time: 08/25/15 1420	
Custody Seal Intact ☐ Yes ☐ No		Date/Time: 8/25/15 1420	
Custody Seal No.: 4,7 #1		Date/Time: 8/25/15 1420	
Cooler Temperature(s) °C and Other Remarks:		Company: 7A	

Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 480-86165-1

Login Number: 86165

List Number: 1

Creator: Kolb, Chris M

List Source: TestAmerica Buffalo

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