

**From:** Langdon, Robert <RLangdon@scsengineers.com>  
**Sent:** Friday, March 10, 2017 1:44 PM  
**To:** Cieslak, Douglas J - DNR  
**Cc:** Vanessa Wishart (VWishart@staffordlaw.com); Kent, P  
**Subject:** Arctic Laundry & Cleaners - Groundwater Sample Results (Monitoring Wells)  
**Attachments:** J124176-1 UDS Level 2 Report Final Report.pdf; 3949\_001.pdf; Table 2 Groundwater VOCs.pdf

Doug –

I've attached a laboratory report for groundwater samples collected from Arctic Laundry & Cleaners monitoring wells MW-1 through MW-3. The samples were collected on February 21<sup>st</sup>. The monitoring well locations are shown on the attached map. The map also shows groundwater contours and the estimated flow direction based on water levels measured at the wells. Groundwater flow is to the northwest.

Sample analytical results for the monitoring wells are summarized in the attached Table along with prior sample results for the direct push borings GP-1 through GP-11. VOCs were not detected in excess of enforcement standards in any of the monitoring well samples and PCE was detected in only in the sample from downgradient monitoring well MW-3.

We will follow up with a more detailed report summarizing the recent soil, groundwater, and vapor sampling work.

-Rob

**Robert Langdon**

Senior Hydrogeologist/Project Manager

**SCS ENGINEERS**

2830 Dairy Drive

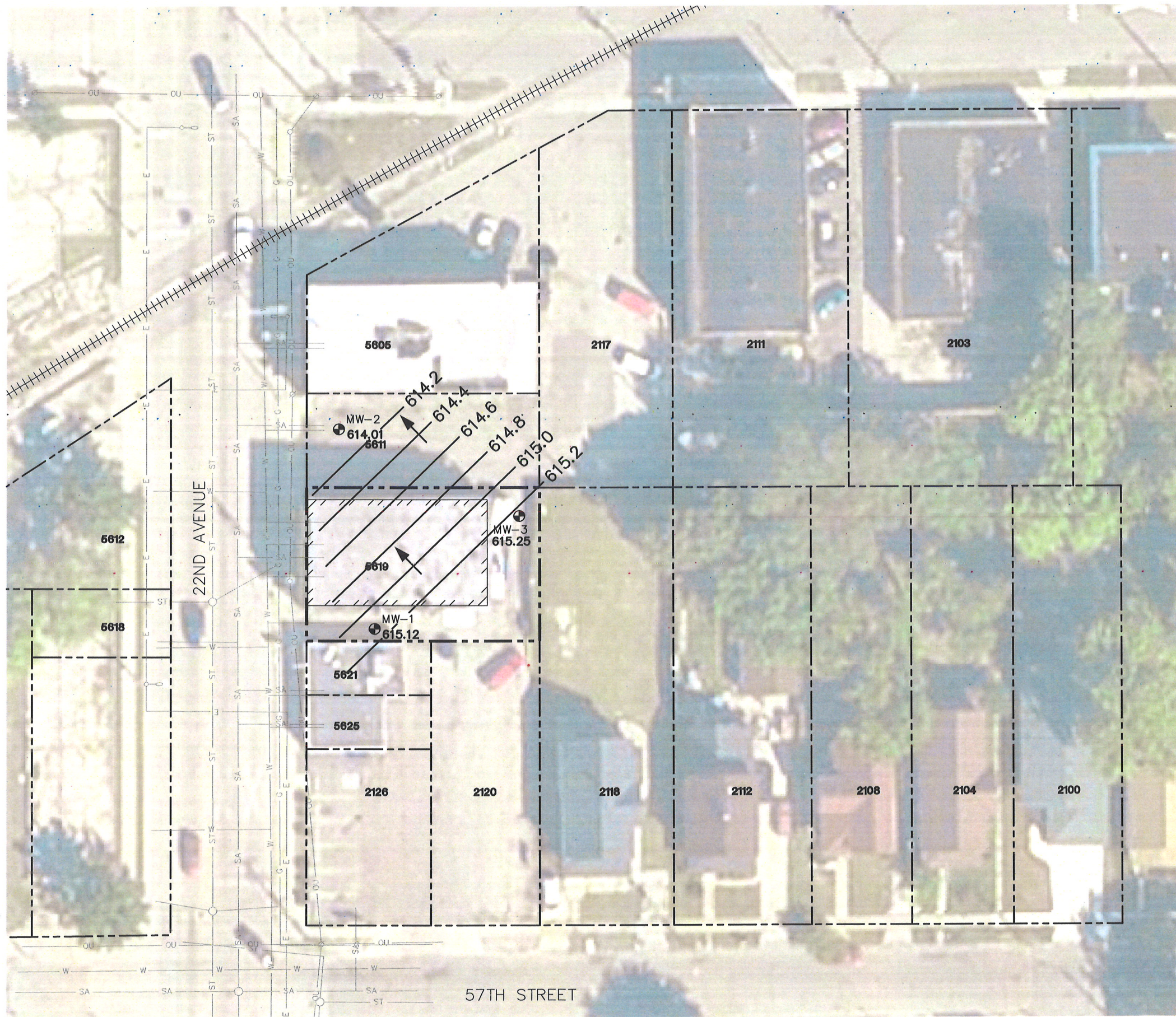
Madison, WI 53718

608.224.2830

Direct: 608.216.7329 • Cell: 608.212.3995

[www.scsengineers.com](http://www.scsengineers.com)

I:\25216186.00\Drawings\Wtbl.dwg, 3/7/2017 9:32:51 AM

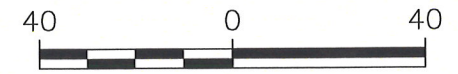


LEGEND

- APPROXIMATE PROPERTY LINE (5619 22ND AVENUE)
- APPROXIMATE PROPERTY LINE
- 5619** PROPERTY ADDRESS NUMBER
- RAILROAD TRACKS
- ELECTRIC (BURIED)
- ELECTRIC (OVERHEAD)
- GAS MAIN
- SANITARY SEWER
- STORM SEWER
- WATER MAIN
- UTILITY POLE
- STREET LIGHT
- MONITORING WELL
- WATER TABLE CONTOUR
- 615.12** WATER TABLE ELEVATION MEASURED 02.21.17
- APPROXIMATE GROUNDWATER FLOW DIRECTION

NOTES:

1. AERIAL PHOTOGRAPH IMPORTED FROM BING MAPS USING AUTOCAD 2016 GEOLOCATION MAP TOOL.
2. UTILITY LOCATIONS ARE APPROXIMATE, BASED ON 22ND AVENUE STORM SEWER AND LIGHTING DRAWING PROVIDED BY THE CITY OF KENOSHA (STATE PROJECT NO. 3994-03-70, SHEET 2.5).
3. SAMPLE LOCATIONS ARE APPROXIMATE.



SCALE: 1" = 40'

CLIENT	STAFFORD ROSENBAUM, LLP 222 WEST WASHINGTON AVENUE MADISON, WI 53701	SITE	ARCTIC LAUNDRY AND CLEANERS 5619 22ND AVENUE KENOSHA, WISCONSIN
PROJECT NO.	25216186.00	DRAWN BY:	KP
DRAWN:	03/07/17	CHECKED BY:	JD
REVISED:	03/07/17	APPROVED BY:	<i>RL 3-9-17</i>
<b>SCS ENGINEERS</b> 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830		ENGINEER	
			FIGURE 4

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Chicago

2417 Bond Street

University Park, IL 60484

Tel: (708)534-5200

TestAmerica Job ID: 500-124176-1

Client Project/Site: 5619 22nd Ave. Kenosha 25216186

For:

SCS Engineers

2830 Dairy Dr

Madison, Wisconsin 53718

Attn: Mr. Robert Langdon



Authorized for release by:

3/3/2017 4:51:30 PM

Sandie Fredrick, Project Manager II

(920)261-1660

[sandie.fredrick@testamericainc.com](mailto:sandie.fredrick@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

Have a Question?



Visit us at:

[www.testamericainc.com](http://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.*

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Case Narrative . . . . .	3
Detection Summary . . . . .	4
Method Summary . . . . .	5
Sample Summary . . . . .	6
Client Sample Results . . . . .	7
Definitions . . . . .	15
QC Association . . . . .	16
Surrogate Summary . . . . .	17
QC Sample Results . . . . .	18
Chronicle . . . . .	24
Certification Summary . . . . .	25
Chain of Custody . . . . .	26
Receipt Checklists . . . . .	27

# Case Narrative

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

---

**Job ID: 500-124176-1**

---

**Laboratory: TestAmerica Chicago**

## Narrative

---

**Job Narrative  
500-124176-1**

## Comments

No additional comments.

## Receipt

The samples were received on 2/22/2017 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.5° C.

## GC/MS VOA

Method(s) 8260B: The following samples were collected in properly preserved vials for analysis of volatile organic compounds (VOCs). The pH however, was outside the required criteria when verified by the laboratory: MW-1 (500-124176-1), MW-2 (500-124176-2), MW-2-FD (500-124176-3) and MW-3 (500-124176-4). The sample was analyzed within 7 days per EPA recommendation, therefore no further corrective action was needed.

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



# Detection Summary

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Client Sample ID: MW-1

Lab Sample ID: 500-124176-1

No Detections.

## Client Sample ID: MW-2

Lab Sample ID: 500-124176-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloropropane	1.3		1.0	0.43	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-2-FD

Lab Sample ID: 500-124176-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloropropane	1.2		1.0	0.43	ug/L	1		8260B	Total/NA

## Client Sample ID: MW-3

Lab Sample ID: 500-124176-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	1.5		1.0	0.37	ug/L	1		8260B	Total/NA

## Client Sample ID: Trip Blank

Lab Sample ID: 500-124176-5

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Chicago

# Method Summary

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL CHI

**Protocol References:**

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

**Laboratory References:**

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200



# Sample Summary

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
500-124176-1	MW-1	Water	02/21/17 11:35	02/22/17 10:30
500-124176-2	MW-2	Water	02/21/17 11:45	02/22/17 10:30
500-124176-3	MW-2-FD	Water	02/21/17 11:50	02/22/17 10:30
500-124176-4	MW-3	Water	02/21/17 12:00	02/22/17 10:30
500-124176-5	Trip Blank	Water	02/21/17 00:00	02/22/17 10:30

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15



# Client Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: MW-1**  
**Date Collected: 02/21/17 11:35**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			02/28/17 16:15	1
Bromobenzene	<0.36		1.0	0.36	ug/L			02/28/17 16:15	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			02/28/17 16:15	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			02/28/17 16:15	1
Bromoform	<0.48		1.0	0.48	ug/L			02/28/17 16:15	1
Bromomethane	<0.80		2.0	0.80	ug/L			02/28/17 16:15	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			02/28/17 16:15	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
Chloroethane	<0.51		1.0	0.51	ug/L			02/28/17 16:15	1
Chloroform	<0.37		2.0	0.37	ug/L			02/28/17 16:15	1
Chloromethane	<0.32		1.0	0.32	ug/L			02/28/17 16:15	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			02/28/17 16:15	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			02/28/17 16:15	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			02/28/17 16:15	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			02/28/17 16:15	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			02/28/17 16:15	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			02/28/17 16:15	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
Dibromomethane	<0.27		1.0	0.27	ug/L			02/28/17 16:15	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			02/28/17 16:15	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			02/28/17 16:15	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			02/28/17 16:15	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			02/28/17 16:15	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			02/28/17 16:15	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			02/28/17 16:15	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			02/28/17 16:15	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			02/28/17 16:15	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			02/28/17 16:15	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			02/28/17 16:15	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			02/28/17 16:15	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			02/28/17 16:15	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			02/28/17 16:15	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
Naphthalene	<0.34		1.0	0.34	ug/L			02/28/17 16:15	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			02/28/17 16:15	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			02/28/17 16:15	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 16:15	1
Styrene	<0.39		1.0	0.39	ug/L			02/28/17 16:15	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 16:15	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			02/28/17 16:15	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			02/28/17 16:15	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			02/28/17 16:15	1
Toluene	<0.15		0.50	0.15	ug/L			02/28/17 16:15	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			02/28/17 16:15	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			02/28/17 16:15	1

TestAmerica Chicago

# Client Sample Results

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Client Sample ID: MW-1

Date Collected: 02/21/17 11:35

Date Received: 02/22/17 10:30

## Lab Sample ID: 500-124176-1

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			02/28/17 16:15	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			02/28/17 16:15	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			02/28/17 16:15	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			02/28/17 16:15	1
Trichloroethene	<0.16		0.50	0.16	ug/L			02/28/17 16:15	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			02/28/17 16:15	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/28/17 16:15	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			02/28/17 16:15	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			02/28/17 16:15	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			02/28/17 16:15	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			02/28/17 16:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	100		71 - 120					02/28/17 16:15	1
Dibromofluoromethane	95		70 - 120					02/28/17 16:15	1
1,2-Dichloroethane-d4 (Surr)	113		71 - 127					02/28/17 16:15	1
Toluene-d8 (Surr)	96		75 - 120					02/28/17 16:15	1

## Client Sample ID: MW-2

Date Collected: 02/21/17 11:45

Date Received: 02/22/17 10:30

## Lab Sample ID: 500-124176-2

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			02/28/17 16:40	1
Bromobenzene	<0.36		1.0	0.36	ug/L			02/28/17 16:40	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			02/28/17 16:40	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			02/28/17 16:40	1
Bromoform	<0.48		1.0	0.48	ug/L			02/28/17 16:40	1
Bromomethane	<0.80		2.0	0.80	ug/L			02/28/17 16:40	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			02/28/17 16:40	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1
Chloroethane	<0.51		1.0	0.51	ug/L			02/28/17 16:40	1
Chloroform	<0.37		2.0	0.37	ug/L			02/28/17 16:40	1
Chloromethane	<0.32		1.0	0.32	ug/L			02/28/17 16:40	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			02/28/17 16:40	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			02/28/17 16:40	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			02/28/17 16:40	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			02/28/17 16:40	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			02/28/17 16:40	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			02/28/17 16:40	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1
Dibromomethane	<0.27		1.0	0.27	ug/L			02/28/17 16:40	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			02/28/17 16:40	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			02/28/17 16:40	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			02/28/17 16:40	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			02/28/17 16:40	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			02/28/17 16:40	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1

TestAmerica Chicago

# Client Sample Results

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: MW-2**

**Lab Sample ID: 500-124176-2**

**Date Collected: 02/21/17 11:45**

**Matrix: Water**

**Date Received: 02/22/17 10:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,2-Dichloropropane</b>	<b>1.3</b>		1.0	0.43	ug/L			02/28/17 16:40	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			02/28/17 16:40	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			02/28/17 16:40	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			02/28/17 16:40	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			02/28/17 16:40	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			02/28/17 16:40	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			02/28/17 16:40	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			02/28/17 16:40	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1
Naphthalene	<0.34		1.0	0.34	ug/L			02/28/17 16:40	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			02/28/17 16:40	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			02/28/17 16:40	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 16:40	1
Styrene	<0.39		1.0	0.39	ug/L			02/28/17 16:40	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 16:40	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			02/28/17 16:40	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			02/28/17 16:40	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			02/28/17 16:40	1
Toluene	<0.15		0.50	0.15	ug/L			02/28/17 16:40	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			02/28/17 16:40	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			02/28/17 16:40	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			02/28/17 16:40	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			02/28/17 16:40	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			02/28/17 16:40	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			02/28/17 16:40	1
Trichloroethene	<0.16		0.50	0.16	ug/L			02/28/17 16:40	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			02/28/17 16:40	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/28/17 16:40	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			02/28/17 16:40	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			02/28/17 16:40	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			02/28/17 16:40	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			02/28/17 16:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		71 - 120		02/28/17 16:40	1
Dibromofluoromethane	97		70 - 120		02/28/17 16:40	1
1,2-Dichloroethane-d4 (Surr)	111		71 - 127		02/28/17 16:40	1
Toluene-d8 (Surr)	96		75 - 120		02/28/17 16:40	1

**Client Sample ID: MW-2-FD**

**Lab Sample ID: 500-124176-3**

**Date Collected: 02/21/17 11:50**

**Matrix: Water**

**Date Received: 02/22/17 10:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			02/28/17 17:05	1
Bromobenzene	<0.36		1.0	0.36	ug/L			02/28/17 17:05	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			02/28/17 17:05	1

TestAmerica Chicago

# Client Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: MW-2-FD**

**Lab Sample ID: 500-124176-3**

**Date Collected: 02/21/17 11:50**

**Matrix: Water**

**Date Received: 02/22/17 10:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	<0.37		1.0	0.37	ug/L			02/28/17 17:05	1
Bromoform	<0.48		1.0	0.48	ug/L			02/28/17 17:05	1
Bromomethane	<0.80		2.0	0.80	ug/L			02/28/17 17:05	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			02/28/17 17:05	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
Chloroethane	<0.51		1.0	0.51	ug/L			02/28/17 17:05	1
Chloroform	<0.37		2.0	0.37	ug/L			02/28/17 17:05	1
Chloromethane	<0.32		1.0	0.32	ug/L			02/28/17 17:05	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			02/28/17 17:05	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			02/28/17 17:05	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			02/28/17 17:05	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			02/28/17 17:05	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			02/28/17 17:05	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			02/28/17 17:05	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
Dibromomethane	<0.27		1.0	0.27	ug/L			02/28/17 17:05	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			02/28/17 17:05	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			02/28/17 17:05	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			02/28/17 17:05	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			02/28/17 17:05	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			02/28/17 17:05	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
<b>1,2-Dichloropropane</b>	<b>1.2</b>		1.0	0.43	ug/L			02/28/17 17:05	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			02/28/17 17:05	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			02/28/17 17:05	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			02/28/17 17:05	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			02/28/17 17:05	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			02/28/17 17:05	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			02/28/17 17:05	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			02/28/17 17:05	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
Naphthalene	<0.34		1.0	0.34	ug/L			02/28/17 17:05	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			02/28/17 17:05	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			02/28/17 17:05	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 17:05	1
Styrene	<0.39		1.0	0.39	ug/L			02/28/17 17:05	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 17:05	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			02/28/17 17:05	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			02/28/17 17:05	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			02/28/17 17:05	1
Toluene	<0.15		0.50	0.15	ug/L			02/28/17 17:05	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			02/28/17 17:05	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			02/28/17 17:05	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			02/28/17 17:05	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			02/28/17 17:05	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			02/28/17 17:05	1

TestAmerica Chicago

# Client Sample Results

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: MW-2-FD**

**Lab Sample ID: 500-124176-3**

**Date Collected: 02/21/17 11:50**

**Matrix: Water**

**Date Received: 02/22/17 10:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			02/28/17 17:05	1
Trichloroethene	<0.16		0.50	0.16	ug/L			02/28/17 17:05	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			02/28/17 17:05	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/28/17 17:05	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			02/28/17 17:05	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			02/28/17 17:05	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			02/28/17 17:05	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			02/28/17 17:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		71 - 120		02/28/17 17:05	1
Dibromofluoromethane	95		70 - 120		02/28/17 17:05	1
1,2-Dichloroethane-d4 (Surr)	116		71 - 127		02/28/17 17:05	1
Toluene-d8 (Surr)	96		75 - 120		02/28/17 17:05	1

**Client Sample ID: MW-3**

**Lab Sample ID: 500-124176-4**

**Date Collected: 02/21/17 12:00**

**Matrix: Water**

**Date Received: 02/22/17 10:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			02/28/17 17:30	1
Bromobenzene	<0.36		1.0	0.36	ug/L			02/28/17 17:30	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			02/28/17 17:30	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			02/28/17 17:30	1
Bromoform	<0.48		1.0	0.48	ug/L			02/28/17 17:30	1
Bromomethane	<0.80		2.0	0.80	ug/L			02/28/17 17:30	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			02/28/17 17:30	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
Chloroethane	<0.51		1.0	0.51	ug/L			02/28/17 17:30	1
Chloroform	<0.37		2.0	0.37	ug/L			02/28/17 17:30	1
Chloromethane	<0.32		1.0	0.32	ug/L			02/28/17 17:30	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			02/28/17 17:30	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			02/28/17 17:30	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			02/28/17 17:30	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			02/28/17 17:30	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			02/28/17 17:30	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			02/28/17 17:30	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
Dibromomethane	<0.27		1.0	0.27	ug/L			02/28/17 17:30	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			02/28/17 17:30	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			02/28/17 17:30	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			02/28/17 17:30	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			02/28/17 17:30	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			02/28/17 17:30	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			02/28/17 17:30	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			02/28/17 17:30	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			02/28/17 17:30	1

TestAmerica Chicago

# Client Sample Results

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: MW-3**  
**Date Collected: 02/21/17 12:00**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-4**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			02/28/17 17:30	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			02/28/17 17:30	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			02/28/17 17:30	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			02/28/17 17:30	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			02/28/17 17:30	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
Naphthalene	<0.34		1.0	0.34	ug/L			02/28/17 17:30	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			02/28/17 17:30	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			02/28/17 17:30	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 17:30	1
Styrene	<0.39		1.0	0.39	ug/L			02/28/17 17:30	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 17:30	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			02/28/17 17:30	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			02/28/17 17:30	1
<b>Tetrachloroethene</b>	<b>1.5</b>		1.0	0.37	ug/L			02/28/17 17:30	1
Toluene	<0.15		0.50	0.15	ug/L			02/28/17 17:30	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			02/28/17 17:30	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			02/28/17 17:30	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			02/28/17 17:30	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			02/28/17 17:30	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			02/28/17 17:30	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			02/28/17 17:30	1
Trichloroethene	<0.16		0.50	0.16	ug/L			02/28/17 17:30	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			02/28/17 17:30	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/28/17 17:30	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			02/28/17 17:30	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			02/28/17 17:30	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			02/28/17 17:30	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			02/28/17 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		71 - 120		02/28/17 17:30	1
Dibromofluoromethane	96		70 - 120		02/28/17 17:30	1
1,2-Dichloroethane-d4 (Surr)	111		71 - 127		02/28/17 17:30	1
Toluene-d8 (Surr)	96		75 - 120		02/28/17 17:30	1

**Client Sample ID: Trip Blank**  
**Date Collected: 02/21/17 00:00**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-5**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			03/01/17 14:51	1
Bromobenzene	<0.36		1.0	0.36	ug/L			03/01/17 14:51	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			03/01/17 14:51	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			03/01/17 14:51	1
Bromoform	<0.48		1.0	0.48	ug/L			03/01/17 14:51	1
Bromomethane	<0.80		2.0	0.80	ug/L			03/01/17 14:51	1

TestAmerica Chicago

# Client Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-124176-5**

**Date Collected: 02/21/17 00:00**

**Matrix: Water**

**Date Received: 02/22/17 10:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			03/01/17 14:51	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
Chloroethane	<0.51		1.0	0.51	ug/L			03/01/17 14:51	1
Chloroform	<0.37		2.0	0.37	ug/L			03/01/17 14:51	1
Chloromethane	<0.32		1.0	0.32	ug/L			03/01/17 14:51	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			03/01/17 14:51	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			03/01/17 14:51	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			03/01/17 14:51	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			03/01/17 14:51	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			03/01/17 14:51	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			03/01/17 14:51	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
Dibromomethane	<0.27		1.0	0.27	ug/L			03/01/17 14:51	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			03/01/17 14:51	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			03/01/17 14:51	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			03/01/17 14:51	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			03/01/17 14:51	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			03/01/17 14:51	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			03/01/17 14:51	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			03/01/17 14:51	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			03/01/17 14:51	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			03/01/17 14:51	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			03/01/17 14:51	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			03/01/17 14:51	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			03/01/17 14:51	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			03/01/17 14:51	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
Naphthalene	<0.34		1.0	0.34	ug/L			03/01/17 14:51	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			03/01/17 14:51	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			03/01/17 14:51	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			03/01/17 14:51	1
Styrene	<0.39		1.0	0.39	ug/L			03/01/17 14:51	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			03/01/17 14:51	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			03/01/17 14:51	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			03/01/17 14:51	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			03/01/17 14:51	1
Toluene	<0.15		0.50	0.15	ug/L			03/01/17 14:51	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			03/01/17 14:51	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			03/01/17 14:51	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			03/01/17 14:51	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			03/01/17 14:51	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			03/01/17 14:51	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			03/01/17 14:51	1
Trichloroethene	<0.16		0.50	0.16	ug/L			03/01/17 14:51	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			03/01/17 14:51	1

TestAmerica Chicago

# Client Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: Trip Blank**

**Lab Sample ID: 500-124176-5**

**Date Collected: 02/21/17 00:00**

**Matrix: Water**

**Date Received: 02/22/17 10:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			03/01/17 14:51	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			03/01/17 14:51	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			03/01/17 14:51	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			03/01/17 14:51	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			03/01/17 14:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		71 - 120		03/01/17 14:51	1
Dibromofluoromethane	95		70 - 120		03/01/17 14:51	1
1,2-Dichloroethane-d4 (Surr)	101		71 - 127		03/01/17 14:51	1
Toluene-d8 (Surr)	104		75 - 120		03/01/17 14:51	1





## Definitions/Glossary

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

### 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)

# QC Association Summary

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## GC/MS VOA

### Analysis Batch: 373770

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-124176-1	MW-1	Total/NA	Water	8260B	
500-124176-2	MW-2	Total/NA	Water	8260B	
500-124176-3	MW-2-FD	Total/NA	Water	8260B	
500-124176-4	MW-3	Total/NA	Water	8260B	
MB 500-373770/6	Method Blank	Total/NA	Water	8260B	
LCS 500-373770/4	Lab Control Sample	Total/NA	Water	8260B	

### Analysis Batch: 373942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
500-124176-5	Trip Blank	Total/NA	Water	8260B	
MB 500-373942/6	Method Blank	Total/NA	Water	8260B	
LCS 500-373942/15	Lab Control Sample	Total/NA	Water	8260B	

# Surrogate Summary

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

**Matrix: Water**

**Prep Type: Total/NA**

## Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB	DBFM	12DCE	TOL
		(71-120)	(70-120)	(71-127)	(75-120)
500-124176-1	MW-1	100	95	113	96
500-124176-2	MW-2	99	97	111	96
500-124176-3	MW-2-FD	99	95	116	96
500-124176-4	MW-3	98	96	111	96
500-124176-5	Trip Blank	90	95	101	104
LCS 500-373770/4	Lab Control Sample	92	98	101	100
LCS 500-373942/15	Lab Control Sample	88	96	101	107
MB 500-373770/6	Method Blank	99	96	110	97
MB 500-373942/6	Method Blank	84	97	91	87

### Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane

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

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 500-373770/6**

**Matrix: Water**

**Analysis Batch: 373770**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			02/28/17 09:57	1
Bromobenzene	<0.36		1.0	0.36	ug/L			02/28/17 09:57	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			02/28/17 09:57	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			02/28/17 09:57	1
Bromoform	<0.48		1.0	0.48	ug/L			02/28/17 09:57	1
Bromomethane	<0.80		2.0	0.80	ug/L			02/28/17 09:57	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			02/28/17 09:57	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
Chloroethane	<0.51		1.0	0.51	ug/L			02/28/17 09:57	1
Chloroform	<0.37		2.0	0.37	ug/L			02/28/17 09:57	1
Chloromethane	<0.32		1.0	0.32	ug/L			02/28/17 09:57	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			02/28/17 09:57	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			02/28/17 09:57	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			02/28/17 09:57	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			02/28/17 09:57	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			02/28/17 09:57	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			02/28/17 09:57	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
Dibromomethane	<0.27		1.0	0.27	ug/L			02/28/17 09:57	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			02/28/17 09:57	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			02/28/17 09:57	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			02/28/17 09:57	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			02/28/17 09:57	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			02/28/17 09:57	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			02/28/17 09:57	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			02/28/17 09:57	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			02/28/17 09:57	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			02/28/17 09:57	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			02/28/17 09:57	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			02/28/17 09:57	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			02/28/17 09:57	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			02/28/17 09:57	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
Naphthalene	<0.34		1.0	0.34	ug/L			02/28/17 09:57	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			02/28/17 09:57	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			02/28/17 09:57	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 09:57	1
Styrene	<0.39		1.0	0.39	ug/L			02/28/17 09:57	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			02/28/17 09:57	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			02/28/17 09:57	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			02/28/17 09:57	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			02/28/17 09:57	1
Toluene	<0.15		0.50	0.15	ug/L			02/28/17 09:57	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			02/28/17 09:57	1

TestAmerica Chicago

# QC Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-373770/6**  
**Matrix: Water**  
**Analysis Batch: 373770**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			02/28/17 09:57	1
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			02/28/17 09:57	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			02/28/17 09:57	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			02/28/17 09:57	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			02/28/17 09:57	1
Trichloroethene	<0.16		0.50	0.16	ug/L			02/28/17 09:57	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			02/28/17 09:57	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			02/28/17 09:57	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			02/28/17 09:57	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			02/28/17 09:57	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			02/28/17 09:57	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			02/28/17 09:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		71 - 120		02/28/17 09:57	1
Dibromofluoromethane	96		70 - 120		02/28/17 09:57	1
1,2-Dichloroethane-d4 (Surr)	110		71 - 127		02/28/17 09:57	1
Toluene-d8 (Surr)	97		75 - 120		02/28/17 09:57	1

**Lab Sample ID: LCS 500-373770/4**  
**Matrix: Water**  
**Analysis Batch: 373770**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	42.4		ug/L		85	70 - 125
Bromobenzene	50.0	41.4		ug/L		83	70 - 125
Bromochloromethane	50.0	43.0		ug/L		86	70 - 125
Bromodichloromethane	50.0	40.6		ug/L		81	70 - 125
Bromoform	50.0	38.7		ug/L		77	54 - 128
Bromomethane	50.0	55.4		ug/L		111	40 - 150
Carbon tetrachloride	50.0	46.4		ug/L		93	70 - 125
Chlorobenzene	50.0	44.6		ug/L		89	70 - 125
Chloroethane	50.0	47.7		ug/L		95	60 - 139
Chloroform	50.0	43.2		ug/L		86	70 - 125
Chloromethane	50.0	44.2		ug/L		88	60 - 140
2-Chlorotoluene	50.0	41.9		ug/L		84	69 - 125
4-Chlorotoluene	50.0	42.6		ug/L		85	70 - 125
cis-1,2-Dichloroethene	50.0	42.0		ug/L		84	70 - 125
cis-1,3-Dichloropropene	50.0	42.2		ug/L		84	70 - 125
Dibromochloromethane	50.0	41.2		ug/L		82	66 - 125
1,2-Dibromo-3-Chloropropane	50.0	35.9		ug/L		72	51 - 125
1,2-Dibromoethane	50.0	41.3		ug/L		83	70 - 125
Dibromomethane	50.0	41.8		ug/L		84	70 - 125
1,2-Dichlorobenzene	50.0	43.4		ug/L		87	70 - 125
1,3-Dichlorobenzene	50.0	43.5		ug/L		87	70 - 125
1,4-Dichlorobenzene	50.0	43.3		ug/L		87	70 - 125
Dichlorodifluoromethane	50.0	41.1		ug/L		82	51 - 140
1,1-Dichloroethane	50.0	43.8		ug/L		88	70 - 125

TestAmerica Chicago

# QC Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 500-373770/4**  
**Matrix: Water**  
**Analysis Batch: 373770**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	50.0	45.2		ug/L		90	70 - 125
1,1-Dichloroethene	50.0	42.7		ug/L		85	70 - 125
1,2-Dichloropropane	50.0	42.5		ug/L		85	70 - 125
1,3-Dichloropropane	50.0	41.3		ug/L		83	70 - 125
2,2-Dichloropropane	50.0	46.0		ug/L		92	62 - 125
1,1-Dichloropropene	50.0	45.0		ug/L		90	70 - 125
Ethylbenzene	50.0	44.9		ug/L		90	70 - 125
Hexachlorobutadiene	50.0	50.5		ug/L		101	57 - 140
Isopropylbenzene	50.0	42.9		ug/L		86	70 - 125
Methylene Chloride	50.0	41.7		ug/L		83	68 - 125
Methyl tert-butyl ether	50.0	40.6		ug/L		81	67 - 125
Naphthalene	50.0	48.2		ug/L		96	50 - 136
n-Butylbenzene	50.0	46.2		ug/L		92	70 - 125
N-Propylbenzene	50.0	43.7		ug/L		87	70 - 125
p-Isopropyltoluene	50.0	45.5		ug/L		91	70 - 125
sec-Butylbenzene	50.0	44.8		ug/L		90	70 - 125
Styrene	50.0	44.3		ug/L		89	70 - 125
tert-Butylbenzene	50.0	44.5		ug/L		89	70 - 125
1,1,1,2-Tetrachloroethane	50.0	44.7		ug/L		89	68 - 125
1,1,2,2-Tetrachloroethane	50.0	39.6		ug/L		79	68 - 125
Tetrachloroethene	50.0	46.3		ug/L		93	70 - 125
Toluene	50.0	44.8		ug/L		90	70 - 125
trans-1,2-Dichloroethene	50.0	42.2		ug/L		84	70 - 125
trans-1,3-Dichloropropene	50.0	40.6		ug/L		81	70 - 125
1,2,3-Trichlorobenzene	50.0	49.0		ug/L		98	58 - 135
1,2,4-Trichlorobenzene	50.0	48.9		ug/L		98	64 - 126
1,1,1-Trichloroethane	50.0	45.1		ug/L		90	70 - 125
1,1,2-Trichloroethane	50.0	41.7		ug/L		83	70 - 125
Trichloroethene	50.0	46.0		ug/L		92	70 - 125
Trichlorofluoromethane	50.0	49.5		ug/L		99	60 - 126
1,2,3-Trichloropropane	50.0	37.9		ug/L		76	63 - 125
1,2,4-Trimethylbenzene	50.0	43.4		ug/L		87	70 - 125
1,3,5-Trimethylbenzene	50.0	43.8		ug/L		88	70 - 125
Vinyl chloride	50.0	49.6		ug/L		99	70 - 126
Xylenes, Total	100	89.4		ug/L		89	70 - 125

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	92		71 - 120
Dibromofluoromethane	98		70 - 120
1,2-Dichloroethane-d4 (Surr)	101		71 - 127
Toluene-d8 (Surr)	100		75 - 120

**Lab Sample ID: MB 500-373942/6**  
**Matrix: Water**  
**Analysis Batch: 373942**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	<0.15		0.50	0.15	ug/L			03/01/17 10:26	1

TestAmerica Chicago

# QC Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-373942/6**  
**Matrix: Water**  
**Analysis Batch: 373942**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Bromobenzene	<0.36		1.0	0.36	ug/L			03/01/17 10:26	1
Bromochloromethane	<0.43		1.0	0.43	ug/L			03/01/17 10:26	1
Bromodichloromethane	<0.37		1.0	0.37	ug/L			03/01/17 10:26	1
Bromoform	<0.48		1.0	0.48	ug/L			03/01/17 10:26	1
Bromomethane	<0.80		2.0	0.80	ug/L			03/01/17 10:26	1
Carbon tetrachloride	<0.38		1.0	0.38	ug/L			03/01/17 10:26	1
Chlorobenzene	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
Chloroethane	<0.51		1.0	0.51	ug/L			03/01/17 10:26	1
Chloroform	<0.37		2.0	0.37	ug/L			03/01/17 10:26	1
Chloromethane	<0.32		1.0	0.32	ug/L			03/01/17 10:26	1
2-Chlorotoluene	<0.31		1.0	0.31	ug/L			03/01/17 10:26	1
4-Chlorotoluene	<0.35		1.0	0.35	ug/L			03/01/17 10:26	1
cis-1,2-Dichloroethene	<0.41		1.0	0.41	ug/L			03/01/17 10:26	1
cis-1,3-Dichloropropene	<0.42		1.0	0.42	ug/L			03/01/17 10:26	1
Dibromochloromethane	<0.49		1.0	0.49	ug/L			03/01/17 10:26	1
1,2-Dibromo-3-Chloropropane	<2.0		5.0	2.0	ug/L			03/01/17 10:26	1
1,2-Dibromoethane	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
Dibromomethane	<0.27		1.0	0.27	ug/L			03/01/17 10:26	1
1,2-Dichlorobenzene	<0.33		1.0	0.33	ug/L			03/01/17 10:26	1
1,3-Dichlorobenzene	<0.40		1.0	0.40	ug/L			03/01/17 10:26	1
1,4-Dichlorobenzene	<0.36		1.0	0.36	ug/L			03/01/17 10:26	1
Dichlorodifluoromethane	<0.67		2.0	0.67	ug/L			03/01/17 10:26	1
1,1-Dichloroethane	<0.41		1.0	0.41	ug/L			03/01/17 10:26	1
1,2-Dichloroethane	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
1,1-Dichloroethene	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
1,2-Dichloropropane	<0.43		1.0	0.43	ug/L			03/01/17 10:26	1
1,3-Dichloropropane	<0.36		1.0	0.36	ug/L			03/01/17 10:26	1
2,2-Dichloropropane	<0.44		1.0	0.44	ug/L			03/01/17 10:26	1
1,1-Dichloropropene	<0.30		1.0	0.30	ug/L			03/01/17 10:26	1
Ethylbenzene	<0.18		0.50	0.18	ug/L			03/01/17 10:26	1
Hexachlorobutadiene	<0.45		1.0	0.45	ug/L			03/01/17 10:26	1
Isopropylbenzene	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
Isopropyl ether	<0.28		1.0	0.28	ug/L			03/01/17 10:26	1
Methylene Chloride	<1.6		5.0	1.6	ug/L			03/01/17 10:26	1
Methyl tert-butyl ether	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
Naphthalene	<0.34		1.0	0.34	ug/L			03/01/17 10:26	1
n-Butylbenzene	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
N-Propylbenzene	<0.41		1.0	0.41	ug/L			03/01/17 10:26	1
p-Isopropyltoluene	<0.36		1.0	0.36	ug/L			03/01/17 10:26	1
sec-Butylbenzene	<0.40		1.0	0.40	ug/L			03/01/17 10:26	1
Styrene	<0.39		1.0	0.39	ug/L			03/01/17 10:26	1
tert-Butylbenzene	<0.40		1.0	0.40	ug/L			03/01/17 10:26	1
1,1,1,2-Tetrachloroethane	<0.46		1.0	0.46	ug/L			03/01/17 10:26	1
1,1,2,2-Tetrachloroethane	<0.40		1.0	0.40	ug/L			03/01/17 10:26	1
Tetrachloroethene	<0.37		1.0	0.37	ug/L			03/01/17 10:26	1
Toluene	<0.15		0.50	0.15	ug/L			03/01/17 10:26	1
trans-1,2-Dichloroethene	<0.35		1.0	0.35	ug/L			03/01/17 10:26	1
trans-1,3-Dichloropropene	<0.36		1.0	0.36	ug/L			03/01/17 10:26	1

TestAmerica Chicago

# QC Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 500-373942/6**  
**Matrix: Water**  
**Analysis Batch: 373942**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichlorobenzene	<0.46		1.0	0.46	ug/L			03/01/17 10:26	1
1,2,4-Trichlorobenzene	<0.34		1.0	0.34	ug/L			03/01/17 10:26	1
1,1,1-Trichloroethane	<0.38		1.0	0.38	ug/L			03/01/17 10:26	1
1,1,2-Trichloroethane	<0.35		1.0	0.35	ug/L			03/01/17 10:26	1
Trichloroethene	<0.16		0.50	0.16	ug/L			03/01/17 10:26	1
Trichlorofluoromethane	<0.43		1.0	0.43	ug/L			03/01/17 10:26	1
1,2,3-Trichloropropane	<0.41		1.0	0.41	ug/L			03/01/17 10:26	1
1,2,4-Trimethylbenzene	<0.36		1.0	0.36	ug/L			03/01/17 10:26	1
1,3,5-Trimethylbenzene	<0.25		1.0	0.25	ug/L			03/01/17 10:26	1
Vinyl chloride	<0.20		0.50	0.20	ug/L			03/01/17 10:26	1
Xylenes, Total	<0.22		1.0	0.22	ug/L			03/01/17 10:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	84		71 - 120		03/01/17 10:26	1
Dibromofluoromethane	97		70 - 120		03/01/17 10:26	1
1,2-Dichloroethane-d4 (Surr)	91		71 - 127		03/01/17 10:26	1
Toluene-d8 (Surr)	87		75 - 120		03/01/17 10:26	1

**Lab Sample ID: LCS 500-373942/15**  
**Matrix: Water**  
**Analysis Batch: 373942**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	44.9		ug/L		90	70 - 125
Bromobenzene	50.0	47.7		ug/L		95	70 - 125
Bromochloromethane	50.0	46.6		ug/L		93	70 - 125
Bromodichloromethane	50.0	44.2		ug/L		88	70 - 125
Bromoform	50.0	53.8		ug/L		108	54 - 128
Bromomethane	50.0	37.1		ug/L		74	40 - 150
Carbon tetrachloride	50.0	45.4		ug/L		91	70 - 125
Chlorobenzene	50.0	46.6		ug/L		93	70 - 125
Chloroethane	50.0	33.6		ug/L		67	60 - 139
Chloroform	50.0	37.1		ug/L		74	70 - 125
Chloromethane	50.0	38.8		ug/L		78	60 - 140
2-Chlorotoluene	50.0	46.3		ug/L		93	69 - 125
4-Chlorotoluene	50.0	45.4		ug/L		91	70 - 125
cis-1,2-Dichloroethene	50.0	39.6		ug/L		79	70 - 125
cis-1,3-Dichloropropene	50.0	46.9		ug/L		94	70 - 125
Dibromochloromethane	50.0	48.3		ug/L		97	66 - 125
1,2-Dibromo-3-Chloropropane	50.0	34.9		ug/L		70	51 - 125
1,2-Dibromoethane	50.0	44.1		ug/L		88	70 - 125
Dibromomethane	50.0	44.5		ug/L		89	70 - 125
1,2-Dichlorobenzene	50.0	45.9		ug/L		92	70 - 125
1,3-Dichlorobenzene	50.0	46.5		ug/L		93	70 - 125
1,4-Dichlorobenzene	50.0	46.5		ug/L		93	70 - 125
Dichlorodifluoromethane	50.0	28.9		ug/L		58	51 - 140
1,1-Dichloroethane	50.0	48.8		ug/L		98	70 - 125
1,2-Dichloroethane	50.0	48.9		ug/L		98	70 - 125

TestAmerica Chicago



# QC Sample Results

Client: SCS Engineers  
 Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 500-373942/15

Matrix: Water

Analysis Batch: 373942

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethene	50.0	40.1		ug/L		80	70 - 125
1,2-Dichloropropane	50.0	45.3		ug/L		91	70 - 125
1,3-Dichloropropane	50.0	41.1		ug/L		82	70 - 125
2,2-Dichloropropane	50.0	32.2		ug/L		64	62 - 125
1,1-Dichloropropene	50.0	41.4		ug/L		83	70 - 125
Ethylbenzene	50.0	44.7		ug/L		89	70 - 125
Hexachlorobutadiene	50.0	45.1		ug/L		90	57 - 140
Isopropylbenzene	50.0	44.9		ug/L		90	70 - 125
Methylene Chloride	50.0	44.5		ug/L		89	68 - 125
Methyl tert-butyl ether	50.0	35.2		ug/L		70	67 - 125
Naphthalene	50.0	38.9		ug/L		78	50 - 136
n-Butylbenzene	50.0	38.6		ug/L		77	70 - 125
N-Propylbenzene	50.0	43.1		ug/L		86	70 - 125
p-Isopropyltoluene	50.0	44.8		ug/L		90	70 - 125
sec-Butylbenzene	50.0	42.4		ug/L		85	70 - 125
Styrene	50.0	45.1		ug/L		90	70 - 125
tert-Butylbenzene	50.0	43.7		ug/L		87	70 - 125
1,1,1,2-Tetrachloroethane	50.0	48.5		ug/L		97	68 - 125
1,1,1,2,2-Tetrachloroethane	50.0	45.5		ug/L		91	68 - 125
Tetrachloroethene	50.0	50.6		ug/L		101	70 - 125
Toluene	50.0	47.9		ug/L		96	70 - 125
trans-1,2-Dichloroethene	50.0	45.2		ug/L		90	70 - 125
trans-1,3-Dichloropropene	50.0	46.1		ug/L		92	70 - 125
1,2,3-Trichlorobenzene	50.0	40.3		ug/L		81	58 - 135
1,2,4-Trichlorobenzene	50.0	40.8		ug/L		82	64 - 126
1,1,1-Trichloroethane	50.0	44.9		ug/L		90	70 - 125
1,1,2-Trichloroethane	50.0	48.8		ug/L		98	70 - 125
Trichloroethene	50.0	48.1		ug/L		96	70 - 125
Trichlorofluoromethane	50.0	36.4		ug/L		73	60 - 126
1,2,3-Trichloropropane	50.0	41.5		ug/L		83	63 - 125
1,2,4-Trimethylbenzene	50.0	43.1		ug/L		86	70 - 125
1,3,5-Trimethylbenzene	50.0	47.5		ug/L		95	70 - 125
Vinyl chloride	50.0	46.9		ug/L		94	70 - 126
Xylenes, Total	100	80.7		ug/L		81	70 - 125

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
4-Bromofluorobenzene (Surr)	88		71 - 120
Dibromofluoromethane	96		70 - 120
1,2-Dichloroethane-d4 (Surr)	101		71 - 127
Toluene-d8 (Surr)	107		75 - 120

# Lab Chronicle

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

**Client Sample ID: MW-1**  
**Date Collected: 02/21/17 11:35**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	373770	02/28/17 16:15	PMF	TAL CHI

**Client Sample ID: MW-2**  
**Date Collected: 02/21/17 11:45**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	373770	02/28/17 16:40	PMF	TAL CHI

**Client Sample ID: MW-2-FD**  
**Date Collected: 02/21/17 11:50**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	373770	02/28/17 17:05	PMF	TAL CHI

**Client Sample ID: MW-3**  
**Date Collected: 02/21/17 12:00**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-4**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	373770	02/28/17 17:30	PMF	TAL CHI

**Client Sample ID: Trip Blank**  
**Date Collected: 02/21/17 00:00**  
**Date Received: 02/22/17 10:30**

**Lab Sample ID: 500-124176-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	373942	03/01/17 14:51	TCT	TAL CHI

## Laboratory References:

TAL CHI = TestAmerica Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

# Certification Summary

Client: SCS Engineers  
Project/Site: 5619 22nd Ave. Kenosha 25216186

TestAmerica Job ID: 500-124176-1

## Laboratory: TestAmerica Chicago

The certifications listed below are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Wisconsin	State Program	5	999580010	08-31-17

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING


2417 Bond Street, University Park, IL 60484  
 Phone: 708.534.5200 Fax: 708.534.5211

Report To: Rob Langdon  
 Contact: R.Langdon  
 Company: SCS Engineers  
 Address: 2830 Dairy Drive  
 Address:  
 Phone: 608-216-7329  
 Fax:  
 E-Mail: R.Langdon@scsengineers.com

Bill To: (optional)  
 Contact:  
 Company:  
 Address: SAME  
 Address:  
 Phone:  
 Fax:

## Chain of Custody Record

Lab Job #: 500-124176  
 Chain of Custody Number: \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_  
 Temperature °C of Cooler: 49-79.5

Client		Client Project #		Preservative		Parameter		Project Name		Project Location/State		Lab Project #		Sampler		Lab PM		Preservative Key	
SCS Engineers		25216106		1		VOCs		5619 22nd Ave. Kenosha		WI				Nate Havens				 500-124176 COC	
Lab ID	MS/MSD	Sample ID		Sampling		# of Containers	Matrix	Comments											
				Date	Time														
1		MW-1		2-21-17	11:35	3	W	X											
2		MW-2			11:45	3	W	X											
3		MW-2-FD			11:50	3	W	X											
4		MW-3			12:00	3	W	X											
5		TPEP Blank				2	W	X											

Turnaround Time Required (Business Days)

\_\_\_ 1 Day \_\_\_ 2 Days \_\_\_ 5 Days 7 Days \_\_\_ 10 Days \_\_\_ 15 Days \_\_\_ Other

Sample Disposal

Return to Client  Disposal by Lab  Archive for \_\_\_ Months (A fee may be assessed if samples are retained longer than 1 month)

Requested Due Date

Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Nate Havens	SCS	2/21/17	1500	John Seng	TALHT	02/22/17	1050
Relinquished By	Company	Date	Time	Received By	Company	Date	Time
Relinquished By	Company	Date	Time	Received By	Company	Date	Time

Lab Courier

Shipped FX Priority

Hand Delivered

Matrix Key

WW - Wastewater SE - Sediment  
 W - Water SO - Soil  
 S - Soil L - Leachate  
 SL - Sludge WI - Wipe  
 MS - Miscellaneous DW - Drinking Water  
 OL - Oil O - Other  
 A - Air

Client Comments

Lab Comments:

*[Signature]*

## Login Sample Receipt Checklist

Client: SCS Engineers

Job Number: 500-124176-1

**Login Number: 124176**

**List Source: TestAmerica Chicago**

**List Number: 1**

**Creator: Sanchez, Ariel M**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are 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	4.5
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

**Table 2. Groundwater Analytical Results Summary**  
**Former Arctic Laundry & Cleaners - 5619 22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00**  
 (Results are in µg/L)

Sample	Date	Lab Notes	PCE	TCE	VC	cis-1,2-DCE	trans-1,2-DCE	Other VOCs
GP-1	8/25/1994	--	<u>42.0</u>	<u>1.0</u>	<3	<1	<1	Toluene <u>7.2</u>
GP-2	10/20/1995	--	<u>13</u>	<1.0	<3.0	<1.0	<1.0	ND
GP-3	10/20/1995	--	<u>50</u>	<1.0	<3.0	<1.0	<1.0	ND
GP-4	10/20/1995	--	<u>14</u>	<u>2.2</u>	<3.0	<u>6.2</u>	<1.0	ND
GP-5	10/26/1995	--	<1.0	<1.0	<3.0	<1.0	<1.0	ND
GP-6	10/26/1995	--	<1.0	<1.0	<3.0	<1.0	<1.0	ND
GP-7	2/6/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
GP-8	2/6/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
GP-9	2/6/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
GP-10	2/6/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
GP-11	2/6/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
MW-1	2/21/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
MW-2	2/21/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	1,2-Dichloropropane <u>1.3</u>
	2/21/2017 (DUP)	--	<0.37	<0.16	<0.20	<0.41	<0.35	1,2-Dichloropropane <u>1.2</u>
MW-3	2/21/2017	--	<u>1.5</u>	<0.16	<0.20	<0.41	<0.35	ND

**Table 2. Groundwater Analytical Results Summary**  
**Former Arctic Laundry & Cleaners - 5619 22nd Avenue, Kenosha, Wisconsin / SCS Engineers Project #25216186.00**  
 (Results are in µg/L)

Sample	Date	Lab Notes	PCE	TCE	VC	cis-1,2-DCE	trans-1,2-DCE	Other VOCs
Trip Blank	2/6/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
	2/21/2017	--	<0.37	<0.16	<0.20	<0.41	<0.35	ND
NR 140 Enforcement Standards (ESs)			5	5	0.2	70	100	Toluene 800 1,2-Dichloropropane 5
NR 140 Preventive Action Limits (PALs)			0.5	0.5	0.02	7	20	Toluene 160 1,2-Dichloropropane 0.5

Abbreviations:

µg/L = micrograms per liter or parts per billion (ppb)

VC = Vinyl Chloride

NA = Not Analyzed

DCE = Dichloroethene

TCE = Trichloroethene

ND = Not Detected

PCE = Tetrachloroethene

VOCs = Volatile Organic Compounds

-- = Not Applicable

Notes:

NR 140 ESs - Wisconsin Administrative Code (WAC), Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015.

NR 140 PALs - WAC, Chapter NR 140.10 Table 1 - Public Health Groundwater Quality Standards from July 2015.

**Bold+underlined** values meet or exceed NR 140 ESs.

*Italic+underlined* values meet or exceed NR 140 PALs.

8/23/1994, 10/20/1995, and 10/26/1995 samples collected by Sigma Environmental Services, Inc., of Oak Creek, WI

2/6/2017 and 2/21/2017 samples collected by SCS Engineers of Madison, WI

Laboratory Notes/Qualifiers:

None

Created by: LMH Date: 2/21/2017

Last revision by: AV Date: 3/6/2017

Checked by: LMH Date: 3/6/2017

I:\25216186.00\Data and Calculations\Tables\[Groundwater\_Drycleaner.xlsx]Drycleaner