

DRAFT
Pulsed-Pumping Report
Mr. C's Dry Cleaners Site
East Aurora, New York

NYSDEC Site No. 915157

February 2018

Prepared for:

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able of Contents

Section	Page
1	Introduction1-1
2	Sampling Schedule and Methodology2-1
3	Results3-1
3.1	Air Stripper Treatment System Evaluation 3-1
3.2	Analysis of Influent VOCs to Determine the Dependence of VOC Removal on the Treatment System 3-3
3.3	Evaluation of Individual Pumping Wells 3-4
3.4	Historical Comparison of Pumping Well Analytical Results to Demonstrate Optimization of Contaminant Capture..... 3-8
4	Conclusion4-1
4.1	Summary Evaluation of Pulsed-Pumping Program 4-1
4.2	Recommendations 4-1
5	References.....5-1
Appendix	
A	Pulsed-Pumping Work Plan..... A-1
B	Analytical Results of Samples from Pumping Wells B-1
C	Minitab Statistical Analysis C-1



List of Tables



Table		Page
2-1	Groundwater Sampling Schedule during the Pulsed-Pumping Program	2-1
3-1	VOC Mass Removal and Removal Rates during the Pulsed-Pumping Program.....	3-2

List of Figures

Figure		Page
1-1	General Site Location Map	1-3
1-2	Groundwater Pumping Wells and Treatment System Location Map	1-5
3-1	Historical Groundwater Treatment Trends: Cumulative Pounds of VOCs Removed, September 2002 – November 2017	3-2
3-2	VOC Removal Rates from January 10 to November 9, 2017 (Change in VOCs Removed vs. Time).....	3-3
3-3	Cumulative VOCs Removed from November 2010 to November 2017	3-4
3-4	2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-4.....	3-6
3-5	2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-5.....	3-6
3-6	2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-6.....	3-7
3-7	2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-7	3-7
3-8	2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-8.....	3-8
3-9	Historical Concentrations of Tetrachloroethylene (PCE) in Groundwater Samples from Groundwater Pumping Wells PW-4, PW-5, PW-6, PW-7, and PW-8	3-9

List of Abbreviations and Acronyms

cis-DCE	cis-1,2-dichloroethylene
DER	Division of Environmental Remediation
EEEP	Ecology and Environment Engineering, P.C.
lbs/d	pounds per day
NYSDEC	New York State Department of Environmental Conservation
OM&M	operations, maintenance, and monitoring
Site	Mr. C's Dry Cleaners Site
SMP	Site Management Plan
SPDES	State Pollutant Discharge Elimination System
VOC	volatile organic compound

1

Introduction

As part of the New York State Inactive Hazardous Waste Disposal Site Remedial Program administered by the New York State Department of Environmental Conservation (NYSDEC), this *Draft Pulsed-Pumping Report* was prepared by Ecology and Environment Engineering, P.C. (EEEPC) for the Mr. C's Dry Cleaners Site No. 9-15-157 (herein referred to as "the site"). The general site location is shown on Figure 1-1. The groundwater pumping wells and treatment system location map is provided as Figure 1-2.

In November 2016, EEEPC prepared a Pulsed-Pumping Work Plan designed to provide sufficient groundwater data to determine whether asymptotic conditions have been achieved at the site by the groundwater pump-and-treat systems in order to support consideration of a treatment system shutdown (EEEPC 2016). The Pulsed-Pumping Work Plan was approved by NYSDEC on December 6, 2016. A copy of the approved plan is provided as Appendix A.

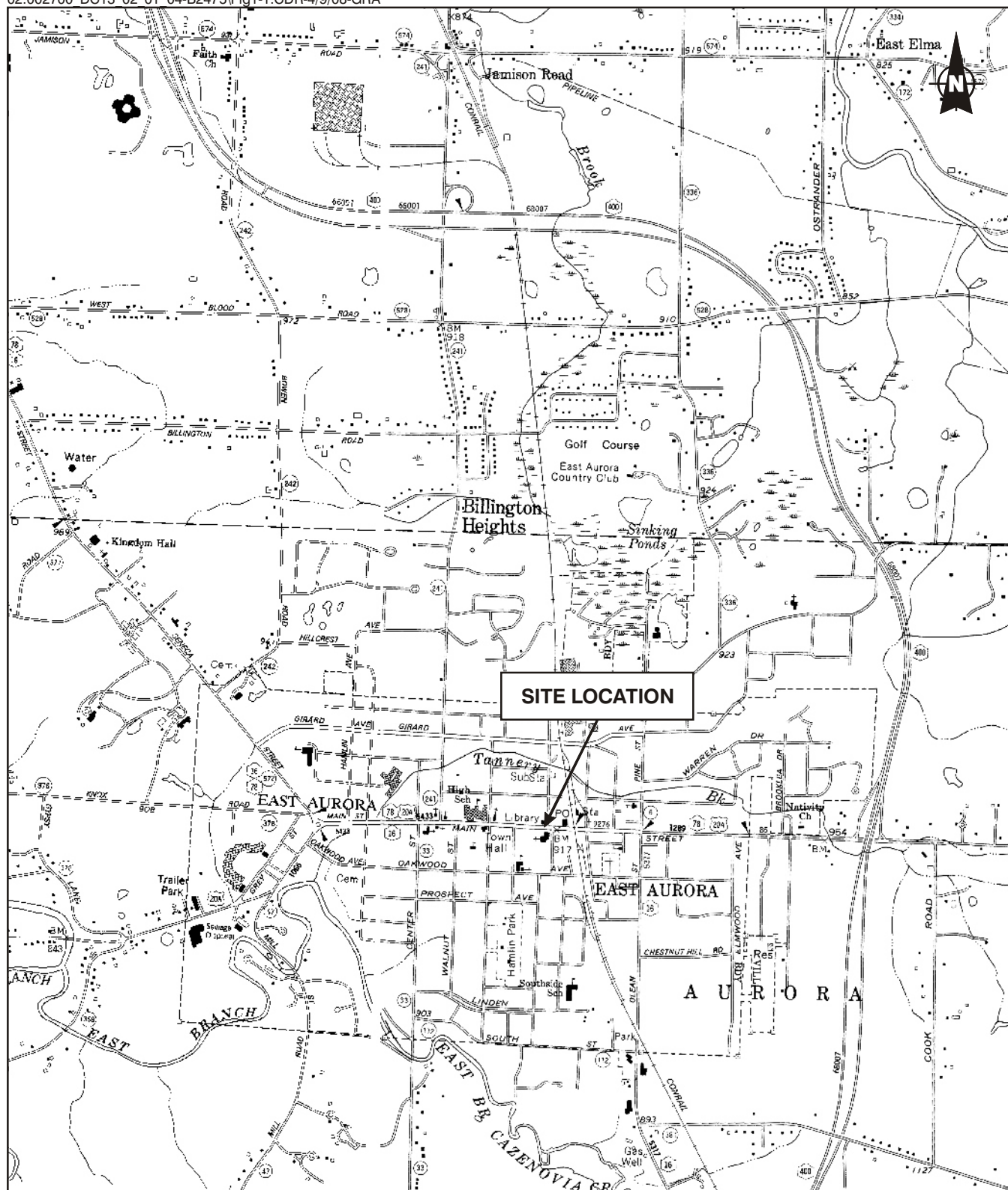
Pulse pumping of the treatment system and the selected pumping wells occurred over a 10-month period in accordance with the Pulsed-Pumping Work Plan. As per Section 6.4 of the NYSDEC Division of Environmental Remediation (DER)-10 *Technical Guidance for Site Investigation and Remediation, Chapter 6 - Site Management, Periodic Review, and Closeout* (NYSDEC 2010), Remedial Process Closure Requirements, Article b, in order for the groundwater and air-stripping treatment systems to be eligible for shut down, two requirements must be met: (1) the operation of the system(s) must reach asymptotic, or steady state, removal rates; and (2) the mass of contaminants extracted over time shall not be dependent on continued treatment operations.

EEEPC completed the following actions to advance NYSDEC's request to meet the NYSDEC DER-10 remedial process closure requirements:

1. Restarted the groundwater pumping wells on the west side of Whaley Avenue (groundwater pumping wells PW-4, PW-5, PW-6, PW-7, and PW-8) and the on-site treatment system on December 27, 2016, in accordance with the Pulsed-Pumping Work Plan;
2. Shutdown and locked-out and tagged-out (LOTO) the groundwater pumping wells on the east side of Whaley Avenue (groundwater pumping wells RW-1, PW-2, and PW-3) on December 27, 2016;

3. Collected groundwater samples at pumps located west of Whaley Avenue following a pulsed-pumping schedule to assess changes in volatile organic compound (VOC) concentrations over time;
4. Collected influent and effluent samples from the treatment system for analysis corresponding to the sampling periods in the Pulsed-Pumping Work Plan; and
5. Performed a statistical analysis (t-test) on the groundwater and treatment system analytical data collected from January to November 2017.

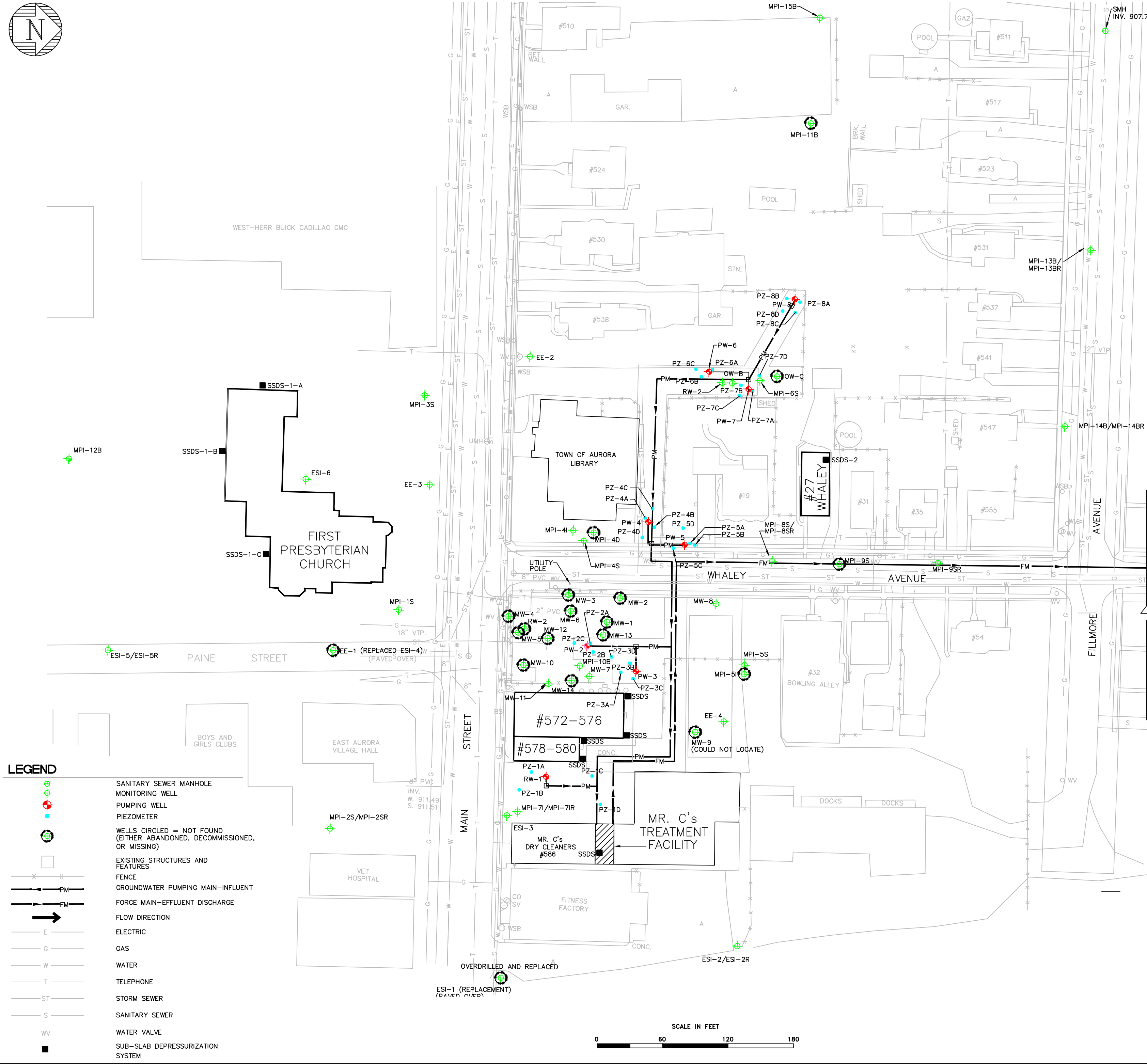
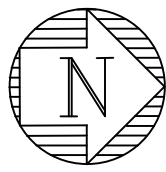
The analytical results from each round of the pulsed-pumping program are provided in Appendix B.



SOURCE: NYS Department of Transportation Raster Quadrangle, 1988.



Figure 1-1 General Site Location Map



NOTES:

- HORIZONTAL CONTROL IS BASED UPON THE NEW YORK STATE PLANE COORDINATE SYSTEM, WEST ZONE, 1983 ADJUSTMENT (NAD 83) AND WAS OBTAINED FROM A MAP PREPARED BY WENDEL DUCHSCHERER ARCHITECTS AND ENGINEERS PC (NYS SITE No. 9-15-157) NYSDEC CONTRACT No. D004180.
- ELEVATIONS ARE BASED UPON NORTH GEODETIC VERTICAL DATUM, 1929 (NGVD 1929).
- BENCHMARK IS LOCATED NEAR THE NORTH EAST CORNER OF MAIN STREET AND PAINE STREET, BEING A BRASS DISC SET IN THE TOP OF CONCRETE BASE - ELEVATION 916.64'
- UNDERGROUND PIPE LOCATIONS ARE APPROXIMATE.

WELL ABBREVIATIONS

ESI	EMPIRE SOILS WELL (ENVIRONMENTAL SCIENCE INC.)	OW	OBSERVATION WELL
MPI	OBSERVATION WELL (MALCOLM PIRNIE)	PW	PUMPING WELL (TYREE)
MW	MONITORING WELL (MATRIX)	PZ	PIEZOMETER (TYREE)
NA	DATA NOT AVAILABLE	RW	RECOVERY WELL (BY OTHERS)
EE	(ECOLOGY & ENVIRONMENT, ENG. P.C.)		

FIGURE 1-2
MR.C'S DRY CLEANERS SITE LOCATION MAP
EAST AURORA, NEW YORK

2

Sampling Schedule and Methodology

Pursuant to Section 6.4 of DER-10, from January 10 through November 9, 2017, a total of nine groundwater samples were collected at each of the pumps located above the contaminant plume and to the west of Whaley Avenue (PW-4, PW-5, PW-6, PW-7, and PW-8), and eleven samples were collected from both the influent and effluent water of the air stripper treatment system. These samples were collected according to the pulsed-pumping schedule (see Table 2-1) and were analyzed for VOCs.

Table 2-1 Groundwater Sampling Schedule during the Pulsed-Pumping Program

Pumping Well Operation	Start Date	End Date	Duration Between Phases ⁽¹⁾	Sample Date
On	12/27/2016	1/23/2017	4 weeks	1/10/2017 ⁽²⁾
Off	1/23/2017	2/27/2017	5 weeks	1/23/2017 ⁽²⁾
On	2/27/2017	3/21/2017	3 weeks	3/2/2017
Off	3/21/2017	4/28/2017	5 weeks	3/21/2017
On	4/28/2017	5/17/2017	3 weeks	5/1/2017
Off	5/17/2017	6/29/2017	6 weeks	5/17/2017
On	6/29/2017	7/19/2017	3 weeks	6/29/2017
Off	7/19/2017	9/8/2017	7 weeks	7/10/2017
On	9/8/2017	9/18/2017	1 weeks	9/8/2017
Off	9/18/2017	11/9/2017	7 weeks	9/18/2017
On	11/9/2017	N.A.	On until further evaluation	11/9/2017
Total Duration			45 weeks (approximately 10 months)	

Notes:

- ⁽¹⁾ Samples were taken from the influent and effluent and from each pumping well at the beginning and end of each phase when the wells (and treatment system) are operational (10 rounds).
- ⁽²⁾ Only influent and effluent samples were taken on January 10 and 23, 2017. Samples were not taken from the pumping wells during these sampling events due to freezing weather conditions at the site.



2 Sampling Schedule and Methodology

Pumping wells RW-1, PW-2, and PW-3, which are located to the east of Whaley Avenue, were not in operation. The highest-capacity well (RW-1) is located close to the Mr. C's treatment facility and the original source location; however, groundwater concentrations in RW-1 have historically been much lower than in the other pumping wells due to a higher capacity pump.

3

Results

3.1 Air Stripper Treatment System Evaluation

The analytical results for the samples collected from the air stripping treatment system influent and effluent water (11 samples each) during the pulsed-pumping program were provided to NYSDEC in the monthly Operation, Maintenance, and Monitoring (OM&M) reports for the January through November 2017 reporting periods (EEEPD 2017). These effluent analytical results were compared to the requirements for the site-specific State Pollutant Discharge Elimination System (SPDES) Equivalency Permit for the Mr. C's site.

The analytical results for effluent samples collected during the pulsed-pumping program were within the site-specific SPDES Equivalency Discharge Permit limits, with the exception of effluent samples collected on January 23 and May 17, 2017. The results for the effluent samples collected on those dates exceeded the permit requirements for cis-1,2-dichloroethylene (cis-DCE), tetrachloroethylene (PCE), and trichloroethene (TCE). As a result, corrective actions (i.e., cleaning the air stripper and adding a second air pump with diffusers) were performed in accordance with the approved Site Management Plan (SMP). The treatment system effluent was then resampled, and these analytical results were within the SPDES Equivalency Permit discharge requirements.

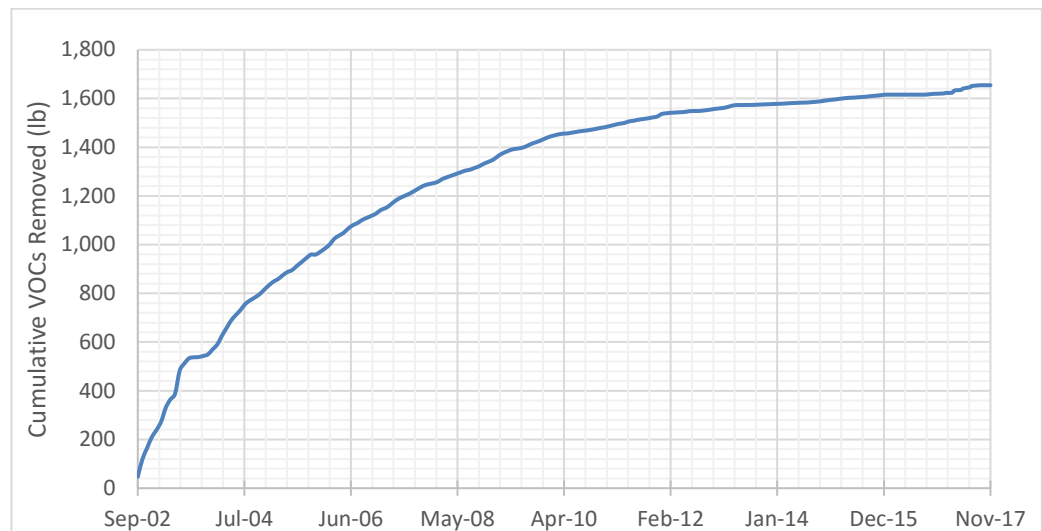
The total amount of VOCs removed from the groundwater was calculated based on the difference between influent and effluent contaminant concentrations and the volume of groundwater processed through the treatment system. Table 3-1 shows the monthly change in the amount of VOCs removed. Figure 3-1 shows the cumulative pounds of VOCs removed each month by the air stripper system since system inception in September 2002 through November 2017 when pulse pumping was completed. The groundwater treatment system has moved toward an asymptotic point in VOC contaminant removal, indicating that the system is no longer efficiently removing VOC contamination from the site groundwater.

Table 3-1 VOC Mass Removal and Removal Rates during the Pulsed-Pumping Program

Monthly Reporting Period	Influent/ Effluent Sampling Date	Date Range	Reporting Period Length (Days)	VOCs Removed Each Reporting Period (lbs)
January 2017	January 23, 2017	January 3 – January 23, 2017	20	2.46
February 2017	March 2, 2017	January 23 – March 2, 2017	38	0.07
March 2017	March 21, 2017	March 2 – March 29, 2017	27	9.53
April 2017	May 1, 2017	March 29 – April 28, 2017	30	2.46
May 2017	May 17, 2017	April 28 – May 105, 2017	17	6.04
June 2017	June 29, 2017	May 15 – July 5, 2017	51	4.90
July 2017	July 10, 2017	July 5 – July 31, 2017	26	5.06
August 2017	Sept. 8, 2017	July 31 – August 23, 2017	23	3.12
September 2017 ¹	Sept. 18, 2017	August 23 – September 29, 2017	37	-
October 2017 ¹	Nov. 9, 2017	September 29 – November 9, 2017	41	-
Total				33.63

Note:

¹ The system was shut down from September 18 through November 9, 2017.



Source: Adapted from EEEPC 2016, Figure 3-2.

Figure 3-1 Historical Groundwater Treatment Trends: Cumulative Pounds of VOCs Removed, September 2002 – November 2017

In accordance with requirements of DER-10, a statistical analysis of the influent VOC concentrations was performed on 10 samples collected in 2017 (using Minitab® statistical software, version 18) to determine whether operation of the system has reached or is approaching asymptotic VOC removal rates (i.e., the slope is equal to zero). A student t-test was performed on the slope of the plot of

influent VOC concentrations over time from January 10 through November 9, 2017 (sample size = 10). During this 10-month period, the treatment system removed between zero and 9.53 pounds of VOCs at each sampling event.

This t-test determined that the slope of the data, or the average VOC removal rate, is not statistically different than zero. The 95% confidence limits on the VOC removal rate were determined to be between -0.106 and +0.128. In other words, there is not enough evidence to support that the true mean differs from zero, at the 0.05 significance level, or the 95% confidence-interval level. See Appendix C for the statistical analysis results. A graphical representation of the VOC removal rates during this time period is shown in the scatterplot on Figure 3-2. The 10 samples demonstrate that asymptotic conditions have been achieved at the 95% confidence interval.

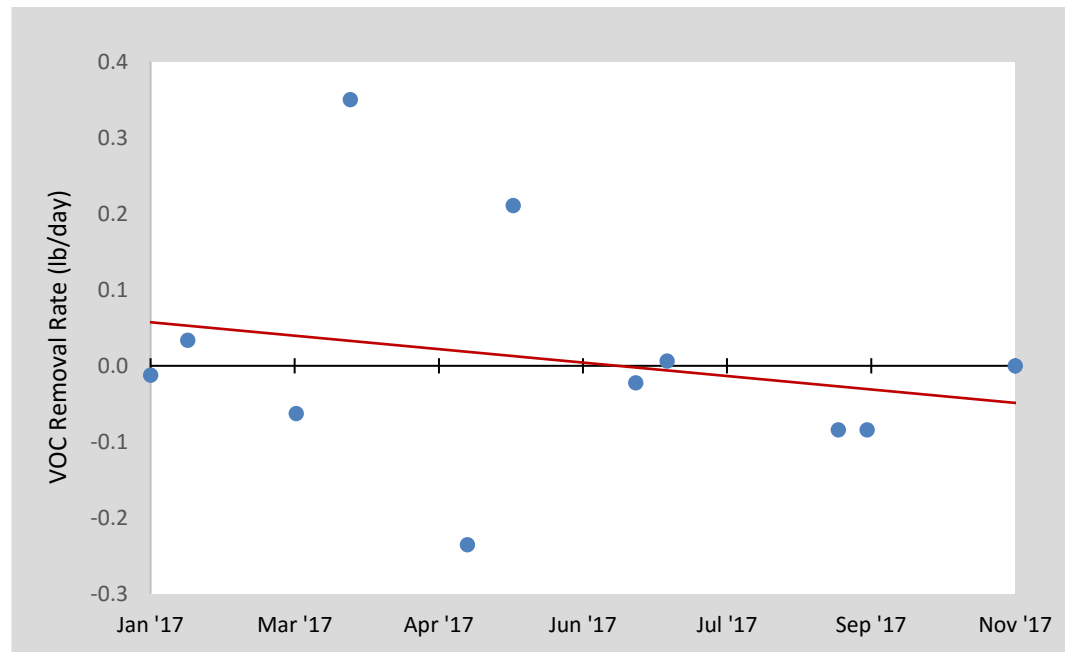


Figure 3-2 VOC Removal Rates from January 10 to November 9, 2017 (Change in VOCs Removed vs. Time)

3.2 Analysis of Influent VOCs to Determine the Dependence of VOC Removal on the Treatment System

Although the 95% confidence interval of the statistical t-test suggests that asymptotic conditions have been achieved, this analysis only considers the influent VOC concentrations within the pulsed-pumping period. Pursuant to DER-10, 10 influent samples were analyzed by the statistical t-test. However, this only represents approximately 5% of the overall time that the treatment system was in operation from September 2002 to November 2017. The results that were analyzed to

demonstrate asymptotic conditions are only a small representation of the VOC removal rate by the treatment system.

Analysis of the influent VOC concentrations from the start of the treatment system in September 2002 to November 2017 shows that the cumulative mass of VOCs removed increases at a less significant rate from November 2010 to November 2017 than from September 2002 to October 2010 (see Figure 3-1). However, Figure 3-3 shows that the mass of VOCs removed from November 2010 to November 2017 is increasing at a rate of approximately 1.5 lbs/month, or approximately 0.05 lbs/day, which demonstrates that the treatment system is continuing to remove influent VOCs at a greater than asymptotic rate.

According to the second requirement of Section 6.4 of DER-10 in order for the groundwater and air-stripping treatment systems to be eligible for shut down, the mass of contaminants extracted over time shall not be dependent on continued treatment operations. Analysis of the VOCs removed by the treatment system from November 2010 to November 2017 suggests that this requirement has not been met and that the mass of contaminants extracted over time is dependent on operation of the treatment system.

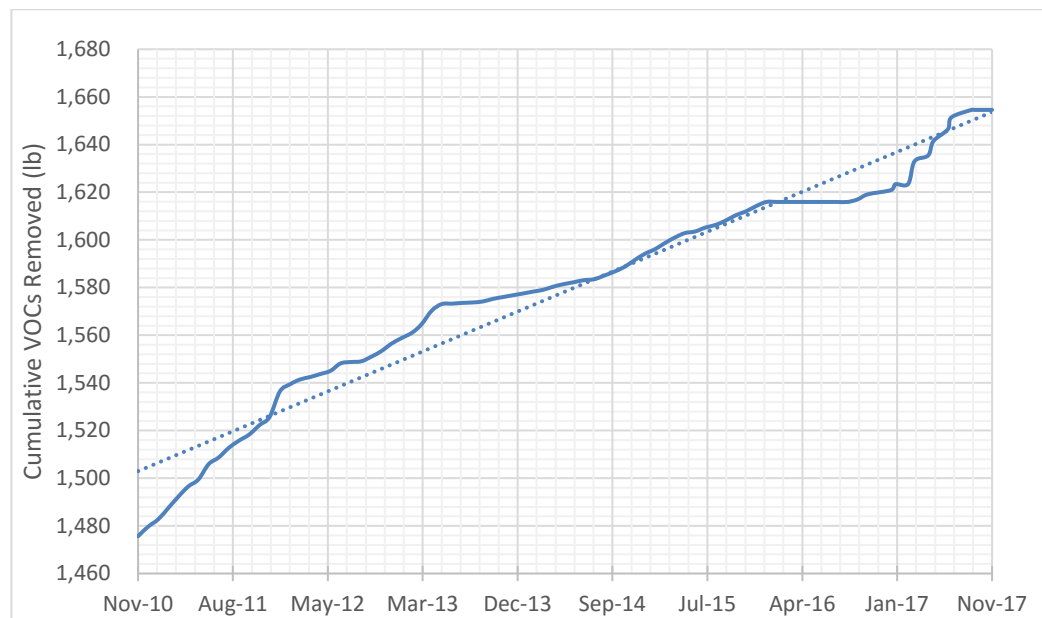


Figure 3-3 Cumulative VOCs Removed from November 2010 to November 2017

3.3 Evaluation of Individual Pumping Wells

Pursuant to Section 6.4(b)2.i of DER-10, nine rounds of groundwater samples were collected from each of the pumping wells (PW-4, PW-5, PW-6, PW-7, and PW-8) during the pulsed-pumping program. The analytical results from each

round of the pulsed-pumping program are provided in Appendix B. The concentrations of PCE, TCE, and cis-DCE in samples collected from each of the pumping wells during the pulsed-pumping program were evaluated to help determine whether PCE is transitioning into daughter products (see Figures 3-4 through 3-8).

The concentrations of PCE in the November 9 samples from pumping wells PW-4, PW-7, and PW-8 were lower than the concentrations in the March 2 samples from the pumping wells. The concentrations of PCE in samples from PW-7 and PW-8 decreased relatively consistently throughout the program, whereas the concentration of PCE in samples from PW-4 fluctuated throughout the program. The concentrations of PCE in samples from PW-5 and PW-6 also fluctuated throughout the program, and there were higher concentrations of PCE in the November 9 samples than in the March 2 samples. This demonstrates that pumping wells PW-4, PW-7, and PW-8 are effectively removing higher concentrations of PCE from the contaminant plume by focusing withdrawals west of Whaley Avenue.

TCE concentrations in the November 9 samples from pumping wells PW-4, PW-5, PW-7, and PW-8 were lower than the concentrations of the March 2 samples in the pumping wells. For PW-6, concentrations of TCE in the November 9 samples were higher than in the March 2 samples. For those pumping wells with a reduction in TCE, the concentrations of TCE decreased at a consistent rate in pumping wells PW-4, PW-5, and PW-8. TCE concentrations in samples from PW-7 decreased more significantly toward the beginning of the program, which was from March to May 2017. This demonstrates that pumping wells PW-4, PW-5, PW-7, and PW-8 are effectively removing higher concentrations of TCE from the contaminant plume by focusing withdrawals west of Whaley Avenue.

The concentration of cis-DCE in the November 9 sample from pumping well PW-5 was lower than the concentrations in the March 2 sample. The concentrations of cis-DCE in the November 9 samples from pumping wells PW-4, PW-6, PW-7, and PW-8 were higher than in the March 2 samples. This demonstrates that pumping well PW-5 is effectively removing higher concentrations of cis-DCE from the contaminant plume by focusing withdrawals west of Whaley Avenue.



Figure 3-4 2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-4



Figure 3-5 2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-5



Figure 3-6 2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-6

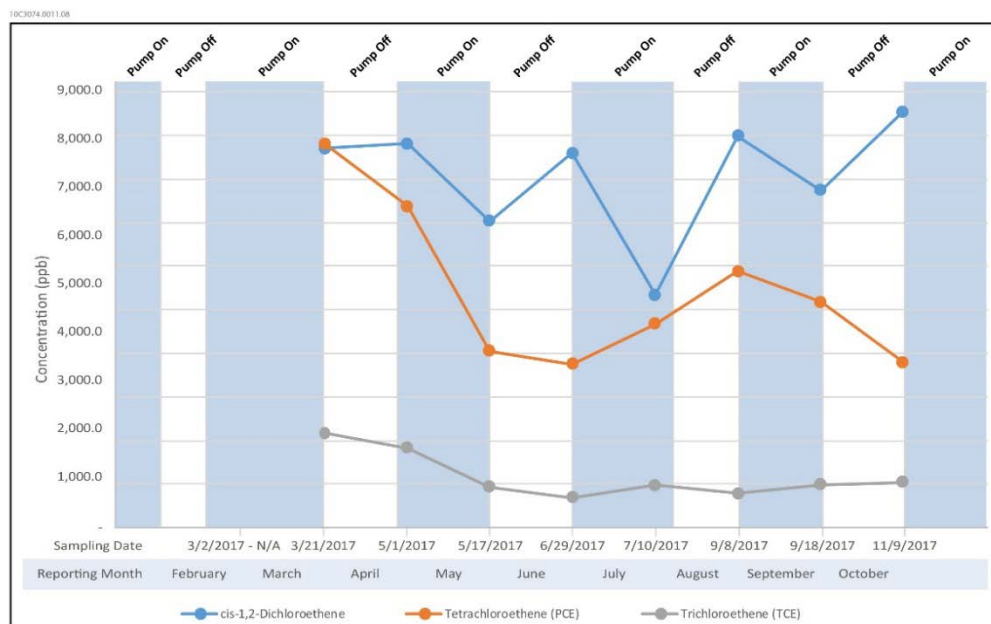


Figure 3-7 2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-7



Figure 3-8 2017 Pulsed-Pumping Program Groundwater Sampling Results for Groundwater Pumping Well PW-8

3.4 Historical Comparison of Pumping Well Analytical Results to Demonstrate Optimization of Contaminant Capture

In order to demonstrate that the pump-and-treat system has been optimized to the fullest extent practicable, EEEPC evaluated the impact of pulsed-pumping operations on the pumping system west of Whaley Avenue (pumping wells PW-4, PW-5, PW-6, PW-7, and PW-8) in terms of the concentration of PCE. Figure 3-9 shows the concentrations of PCE in samples from each pumping well from the start of sampling in 2002 to November 2017. As shown by the figure, there has been an increase in influent PCE concentrations in groundwater captured west of Whaley Avenue as a result of the targeted operation of the pumping wells. Therefore, optimization efforts targeting wells with the low-capacity pumps have been demonstrated to be effective.

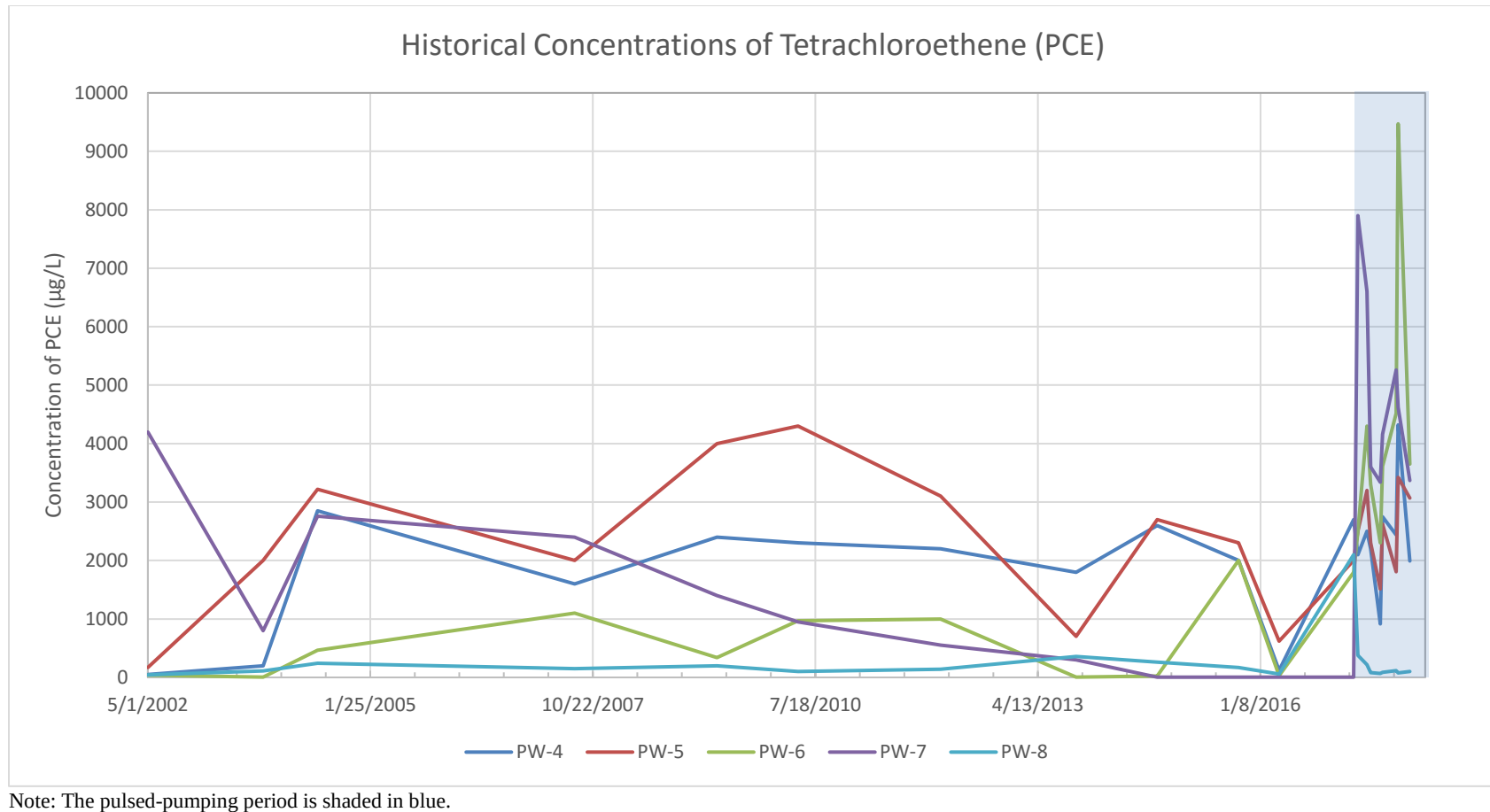


Figure 3-9 Historical Concentrations of Tetrachloroethylene (PCE) in Groundwater Samples from Groundwater Pumping Wells PW-4, PW-5, PW-6, PW-7, and PW-8

4

Conclusion

4.1 Summary Evaluation of Pulsed-Pumping Program

A statistical analysis t-test was performed on the influent VOC concentrations of the treatment system, pursuant to Section 6.4 of DER-10. During this 10-month period, the treatment system removed between approximately zero and 9.53 pounds of VOCs each month. The 95% confidence limits suggest that asymptotic conditions have been achieved during the pulsed-pumping program. However, this statistical analysis only considers the influent VOC concentrations within the pulsed-pumping period, which represents approximately 5% of the overall time that the treatment system was in operation from September 2002 to November 2017. Analysis of the influent VOC concentrations from the start of the treatment system in September 2002 to November 2017 shows that the cumulative mass of VOCs removed increases at a less significant rate from November 2010 to November 2017 than from September 2002 to October 2010. Analysis of the mass of VOCs removed from November 2010 to November 2017 demonstrates that the system has not yet reached asymptotic conditions and that the mass of contaminants extracted over time is dependent on operation of the treatment system.

The analytical results from the individual pumping well samples indicate the following:

- Pumping wells PW-4, PW-7, and PW-8 are effectively removing higher concentrations of PCE from the contaminant plume by focusing withdrawals west of Whaley Avenue.
- Pumping wells PW-4, PW-5, PW-7, and PW-8 are effectively removing higher concentrations of TCE from the contaminant plume by focusing withdrawals west of Whaley Avenue.
- Pumping well PW-5 is effectively removing higher concentrations of cis-DCE from the contaminant plume by focusing withdrawals west of Whaley Avenue.

4.2 Recommendations

To further assess whether targeted operation of the pumping wells to the west of Whaley Avenue can increase removal of VOCs by the treatment system, EEEPC recommends the following actions:

- Continuous operation and monthly sampling of pumping wells to the west of Whaley Avenue (PW-4, PW-5, PW-6, PW-7, and PW-8);
- Shutdown of pumping wells to the east of Whaley Avenue (RW-1, PW-2, and PW-3); and
- Evaluation of the pumped influent groundwater to assess eligibility of treatment system shutdown pursuant to Section 6.4 of DER-10.

EEEPC also recommends continuing operation, maintenance, and monitoring in 2018, which shall continue to include monthly sampling of the treatment system influent and effluent water and monthly sampling of groundwater in each of the pumping wells. These monthly samples shall be analyzed for VOCs by U.S. Environmental Protection Agency method 8260C. The analytical results can be used to help determine whether the PCE has started to transition into its daughter products. This analysis would involve calculating the new removal rate of VOCs and comparing it to the historical removal rate of VOCs.

5

References

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A

Pulsed-Pumping Work Plan

**Draft Pulsed-Pumping
Work Plan**

Former Mr. C's Dry Cleaner's Site

East Aurora, New York

October 2016

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Table of Contents

Section	Page
1	Introduction 1-1
2	Treatment System Removal Rates.....2-1
2.1	Historical Treatment Trends..... 2-1
2.2	Pumping System Optimization..... 2-3
3	Pulsed Pumping3-1
4	References.....4-1
 Appendix	
A	Minitab Project Report – Treatment Removal Rate..... A-1



List of Tables



Table	Page
3-1 Pulse Pumping Groundwater VOC Sampling Schedule	3-3

List of Figures

Figure		Page
2-1	Historical Treatment VOC Removal Trends	2-1
2-2	Asymptotic VOC Removal Trends.....	2-2
3-1	Pulsed Pumping Removal of Residual Contaminants	3-2

List of Abbreviations and Acronyms

cis-DCE	1,2 cis-dichloroethene
cVOC	chlorinated volatile organic compound
DCE	dichloroethene
DER	Division of Environmental Remediation
EEEP	Ecology and Environment Engineering, P.C.
EPA	United States Environmental Protection Agency
IEG	IYER Environmental Group, PLLC
LTM	long-term monitoring
LOTO	lockout and tagout
NYSDEC	New York Department of Environmental Conservation
NAPL	non-aqueous-phase liquid
OM&M	operations, maintenance, and monitoring
PCE	perchloroethene (also known as tetrachloroethene)
RAO	remedial action objective
RSO	Remedial Site Optimization
Site	Former Mr. C's Dry Cleaners Site
TCE	trichloroethene
EPA	United States Environmental Protection Agency
VOC	volatile organic compound

1

Introduction

This proposed pulsed-pumping work plan for the Former Mr. C's Dry Cleaner's Site (Site), NYSDEC Site Number 9-15-157, was prepared by Ecology and Environment Engineering, P.C. (EEEPC) as part of the New York State Inactive Hazardous Waste Disposal Site Remedial Program administered by the New York State Department of Environmental Conservation (NYSDEC).

Operational data indicates that the Mr. C's remedial groundwater pumping and air-stripping treatment system has reached asymptotic removal rates. In accordance with Section 6.4.b.1 of the NYSDEC's Division of Environmental Remediation (DER) *Technical Guidance for Site Investigation and Remediation DER-10*, continued operation and pulsing of the system for a period of time must confirm that asymptotic groundwater conditions have resulted from treatment (NYSDEC 2010). EEEPC recommends performing pulsed-pumping over a nine-month period to support consideration of a treatment system shutdown.

System shutdown may be initiated, with prior DER approval, prior to meeting the site remedial action objectives (RAOs) when the conditions of DER-10 are met. To support the condition in Section 6.4.a.2.ii "demonstrate that the treatment system has been optimized to its fullest extent," EEEPC recommends evaluating the potential to optimize the pump-and-treat system through targeted operation of select pumping wells.

Exclusive operation of pumping wells west of Whaley Avenue may increase total concentrations of chlorinated volatile organic compounds (cVOCs) into the air stripper. The highest-capacity well (RW-1) is located close to the Mr. C's treatment facility and the original source location; however, groundwater concentrations in RW-1 have historically been much lower than the other pumping wells. Optimization efforts will be targeted on wells with the low-capacity pumps located above the plume west of Whaley Avenue, including: PW-4, PW-5, PW-6, PW-7, and PW-8. These wells are located downgradient of the treatment facility in an area with much lower transmissivity, but much higher groundwater cVOC concentrations.

The Mr. C's site has no specified shutdown criteria, so system shutdown shall be in accordance with Section 6.4.b.2 of DER-10. EEEPC recommends the following actions to advance the site toward closure:

- Graphical illustration of the mass of cVOCs extracted over time to illustrate the effectiveness of system operation, the achievement of asymptotic removal rates, and the influence of pulsing on the system;
- Confirmation of asymptotic removal rates through pulsed pumping;
- Sampling of contaminant levels in the individual groundwater pumping wells immediately following a shutdown and just prior to pulsing;
- Sampling of contaminant levels in the treatment system influent and effluent during pulsing; and
- Graphical illustration of cVOC concentrations in pumping wells and in the treatment system influent over time to illustrate the influence of pulsing on the system.

A final remedial site optimization (RSO) report was prepared by EEEPC in October 2016, which recommended bioremediation to address remaining groundwater contamination. Bioremediation would also address associated soil contamination in the treatment area, so no soil sampling is proposed at this time.

As described in the final RSO report, based on the results of long-term monitoring (LTM), the plume's center of mass appears to have migrated northwest since the remedial investigation site investigations and is now located in the area of lower transmissivity. The tail of the plume now extends downgradient of the pumping wells and outside of their radius of influence. As such, the treatment system is not used to control contaminant plume migration, and the proposed activities are appropriate to support consideration of treatment system shutdown.

2

Treatment System Removal Rates

2.1 Historical Treatment Trends

From the inception of its operation in September 2002 through December 2015, the Site pump-and-treat system has achieved 95% operational uptime and removed over 1,600 pounds of volatile organic compounds (VOCs), primarily consisting of cVOCs including perchloroethene (PCE) and trichloroethene (TCE) and more recently 1,2 cis-dichloroethene (cis-DCE; EEEPC 2016). However, due to the migration of the contaminant plume beyond the capture zones of the groundwater pumping wells, the effectiveness of the pump-and-treat system has been declining. In over 10 years of operation the system has gone from removing over 70 pounds of VOCs per month in 2002 and 2003 to removing an average of 2 pounds of VOCs per month in 2015 (see Figure 2-1).

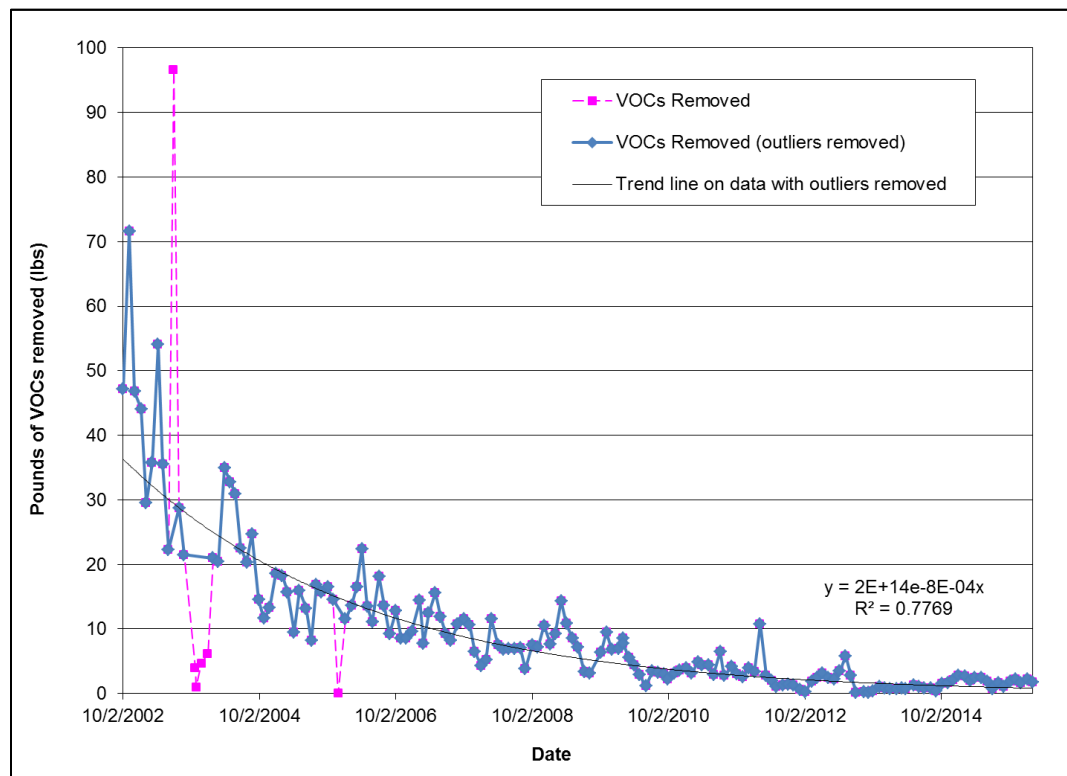


Figure 2-1 Historical Treatment VOC Removal Trends

2 Treatment System Removal Rates

An asymptotic condition is indicated if the change in the influent concentration over time, as determined by the slope of the data, is not significantly different from zero and if the 95% upper and lower confidence bounds on the slope are both near zero (Tucker et al. 1989). Furthermore, by focusing on the recent portion of the time series dataset in the portion that is anticipated to be approaching an asymptote, achievement of an asymptote can be determined sooner than if a regression analysis based on the entire dataset were used. Figure 2-2 presents the treatment system VOC removal rates from October 6, 2014, to February 1, 2016. This date range was selected, because it follows the Enhanced Bioremediation and Bioaugmentation Pilot Study during a timeframe when the system operation was fairly consistent.

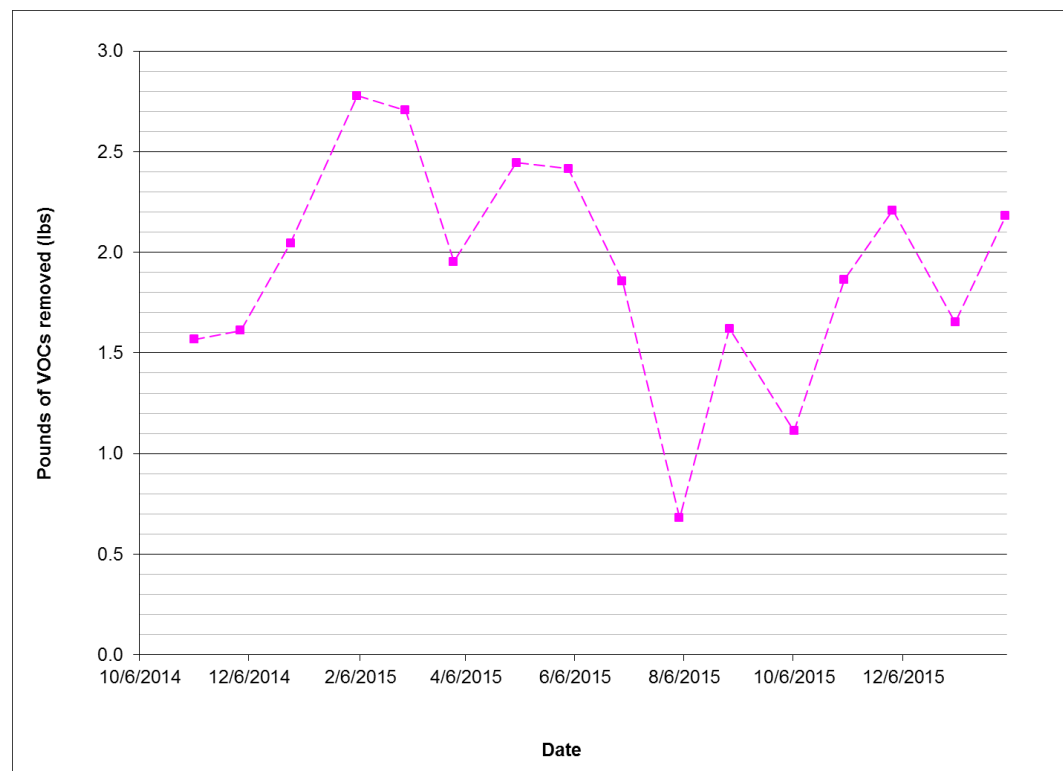


Figure 2-2 Asymptotic VOC Removal Trends

Minitab statistical software was used to perform a student t-test on the slope of the plot of treatment removal rates over time over the time period of October 6, 2014, to February 1, 2016. Over this time period, the treatment system removed 0.68 to 2.78 pounds of VOCs per month. A hypothesis test was performed on the data that determined that the slope of the data is not statistically different than zero. The 95% confidence limits on the slope were determined to be -0.0117 and 0.0106 (see Appendix A). To put the confidence limits into perspective, the average mass of VOCs removed each month over this same time period was 1.91 pounds. These confidence limits, if expressed in terms of the monthly removal

2 Treatment System Removal Rates

rate, not the slope of the removal rate data, would be equivalent to -18% to +17% of the average monthly mass of VOCs removed by the treatment system.

2.2 Pumping System Optimization

In order to demonstrate that the treatment system has been optimized to the fullest extent possible, EEEPC recommends evaluating whether targeted operation of the pumping wells can increase the influent VOCs and mass removed by the treatment system.

Pumping wells PW-5 and PW-7 were locked out and tagged out (LOTO) in May 2013 to avoid secondary impacts on the treatment system due to the pilot bioremediation program performed in 2013. Long-term groundwater monitoring in 2016 showed that the highest VOC concentrations are now targeted around PW-5. EEEPC recommends operating the pump-and-treat system with only pumping wells PW-4, PW-5, PW-6, PW-7, and PW-8 (pumping system gallery west of Whaley Avenue). Pumping wells RW-1, PW-2, and PW-3 would be turned off (pumping system gallery east of Whaley Avenue).

Through this optimization effort, EEEPC anticipates increased influent contaminant concentrations, but a decrease in influent volume. Treatment system influent concentrations may increase due to the conversion of PCE to cis-DCE in the vicinity of these wells. cis-DCE is more mobile than PCE and would be more efficiently captured by the pumps. EEEPC would calculate the new removal rate of the system and compare it to the historical removal rate. Results may be presented in molar concentrations or mass of equivalent PCE for comparison with historical results representing primarily PCE concentrations.

EEEPC and IYER Environmental Group, PLLC (IEG) would monitor the system and mitigate secondary impacts on the treatment system in accordance with the Site Management Plan. Prior to initiating the new mode of system operation, an influent VOC sample, representative of the expected treatment system influent concentrations, would be taken. EEEPC and IEG would then monitor the differential pressure in the air stripping unit to maintain a retention time long enough to remove the cVOCs based on the influent sample results.

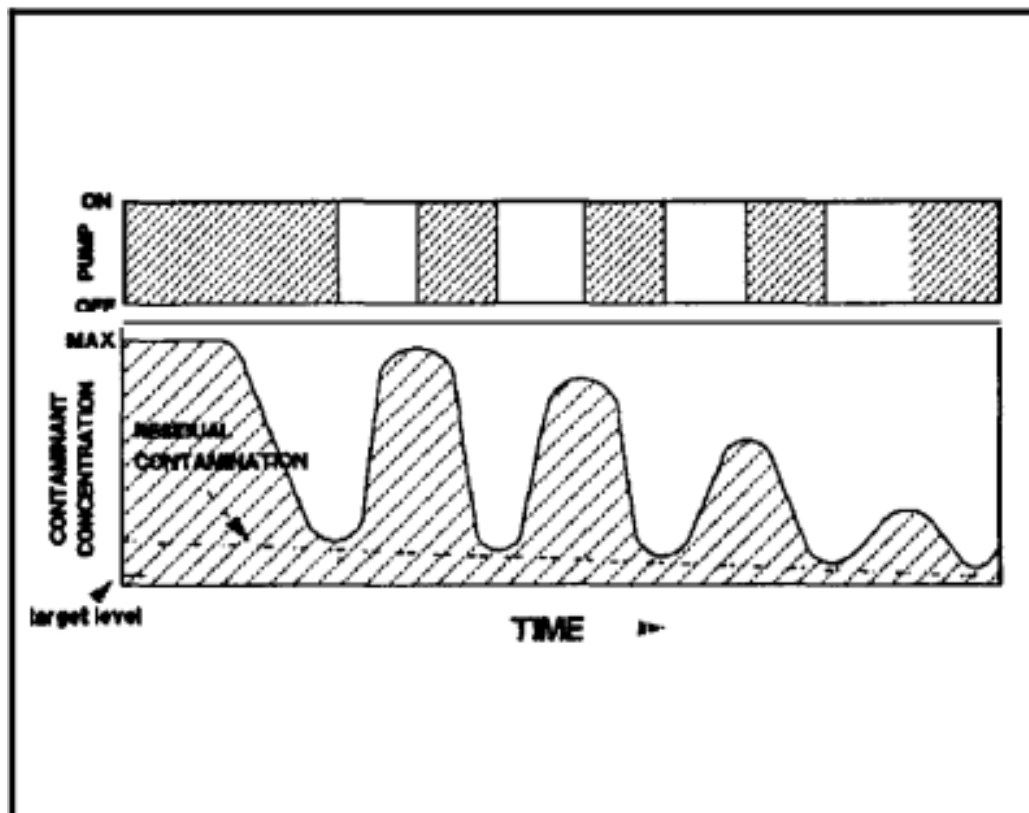
3

Pulsed Pumping

EEEEPC recommends conducting pulsed pumping on the west side of Whaley Avenue to analyze the changes in treatment system's cVOC concentrations; and to analyze cVOC concentrations at each pumping well caused by turning the wells on and off in order to evaluate if greater removal of cVOCs is achievable. During the pulsed-pumping effort, VOC samples would be taken from both the influent and effluent of the treatment system, as well as the individual pumping wells in operation (PW-4, PW-5, PW-6, PW-7, and PW-8).

“Pulsed operation of hydraulic systems is the cycling of extraction or injection wells on and off in active and resting phases. The resting phase of a pulsed-pumping operation can allow sufficient time for contaminants to diffuse out of low permeability zones and into adjacent high permeability zones, until maximum concentrations are achieved in the higher permeability zones. For sorbed contaminants and [non-aqueous-phase liquid] NAPL residuals, sufficient time can be allowed for equilibrium concentrations to be reached in local ground water. Subsequent to each resting phase, the active phase of the cycle removes the minimum volume of contaminated ground water, at the maximum possible concentrations, for the most efficient treatment.” (United States Environmental Protection Agency [EPA] 1989)

A graphical representation of a pumping system's asymptotic removal of contaminants, as required by DER-10, is shown in Source: EPA 1989 Figure 3-1.



Source: EPA 1989.

Figure 3-1 Pulsed Pumping Removal of Residual Contaminants

Conceptual models have been developed for optimization of pulsed-pumping schedules (Lastoskie and Tenney 2007). However, even with the needed model inputs to determine the rate-limited partitioning of the site contamination, the model results may be limited in their usefulness due to the heterogeneous nature of the site geologic setting.

Ideally, the resting (off) time would be long enough to approach the point at which equilibrium contaminant concentrations are reached with the groundwater, but not so long that the contaminant concentrations exceed 70 to 90% of their equilibrium concentrations (Kim 2014). At the request of NYSDEC, the treatment system was shutdown beginning February 4, 2016, to evaluate the possible rebound of contaminants in groundwater. The treatment system was returned to service on October 4, 2016. EEEPC will have IEG, the operations, maintenance and monitoring contractor collect a sample of the influent to the treatment system within one week of system start up once the treatment system operations have stabilized. EEEPC will evaluate the influent cVOC levels in accordance with DER-10. The rebound observed from this longer-duration of system shut-down can be used to inform estimates of the ideal resting time.

3 Pulsed Pumping

Due to the uncertainty in rate-limiting desorption rates at the site and optimal durations for on and off resting phases, the system shall be turned on and off using an adaptable management approach in which the VOC pulse-pumping schedule may be modified based on influent concentration trends. The recommended pulse-pumping schedule shall be as follows: pumping wells would be turned on for one month, then off for one month, on for three weeks, off for five weeks, on for two weeks, and off for six weeks, and so on until 10 satisfactory samples are collected as shown in Table 3-1.

A minimum of 10 samples are required to demonstrate, with 95% confidence, that asymptotic conditions have been reached using the student t-test and hypothesis test on the mean. This adaptable management approach aims to increase the duration at which pumping wells are off, while decrease the duration that pumping wells are on, to give evidence of the cVOC concentrations over time if the pumping well treatment system was shutdown.

If the post-shutdown cVOC removal concentrations are the same or less than the pre-shutdown concentrations, while meeting the target levels of cVOCs, then the system can be considered to no longer remove a significant level of contaminants, and it is appropriate for NYSDEC to consider shutdown of the system. Hence, asymptotic groundwater conditions will have been achieved and the mass of contaminants extracted over time are not dependent on continued groundwater treatment operations.

Table 3-1 Pulse Pumping Groundwater VOC Sampling Schedule

Pumping Well Operation	Duration Between Phases and Groundwater Sampling
On	4 weeks
Off	4 weeks
On	3 weeks
Off	5 weeks
On	2 weeks
Off	6 weeks
On	1 week
Off	7 weeks
On	1 week
Off	8 weeks
Total Duration	41 weeks (Approximately 9 months)
Minimum Number of Groundwater Samples at Each Well	10

If the post-shutdown cVOC removal concentrations show an increase when the groundwater treatment system is re-started, the system continues to be effective in contaminant removal and EEEPC recommends that treatment system operation

continue on a pulse-pumping schedule until the asymptotic removal rates have been demonstrated.

Evaluation of asymptotic groundwater conditions can be performed simultaneously with the evaluation of the system's effectiveness in removing contaminants using a pulsed-pumping schedule.

4

References

- Ecology and Environment Engineering, P.C. 2016. *Final Remedial Site Optimization Alternatives for the Mr. C's Dry Cleaners Site, NYSDEC Site No. 915157*, East Aurora, New York. September 2016.
- _____. 2015. Summary Report for the Mr. C's Dry Cleaners Site Enhanced Bioremediation and Bioaugmentation Pilot Study, NYSDEC Site No. 9-15-157, East Aurora, New York. January 2015.
- Environmental Protection Agency (EPA). 1989. Performance Evaluations of Pump-and-Treat Remediations EPA/540/4-89/005. Prepared by J.F. Keely.
- Kim, Jeong-Woo. 2014. Optimal pumping time for a pump-and-treat determined from radial convergent tracer test. *Geosciences Journal*. Vol. 18. No. 1, p 69-80.
- Lastoskie, CM, and Tenney, CM. 2007. Pulsed pumping process optimization using a potential flow model. *Journal of Contaminant Hydrology*. 2007 Aug 15;93(1-4):111-21.
- New York State Department of Environmental Conservation (NYSDEC). 2010. Division of Environmental Remediation (DER) DER-10 Technical Guidance for Site Investigation and Remediation. May 2010.
- Tucker, Draney, and Kemblowski. 1989. Technological Limits of Groundwater Remediation: A Statistical Evaluation Method in Ground Water: Prevention, Detection, and Restoration, the Westin Galleria, Houston Texas. P. 249-263. November 15-17, 1989.



Minitab Project Report – Treatment Removal Rate

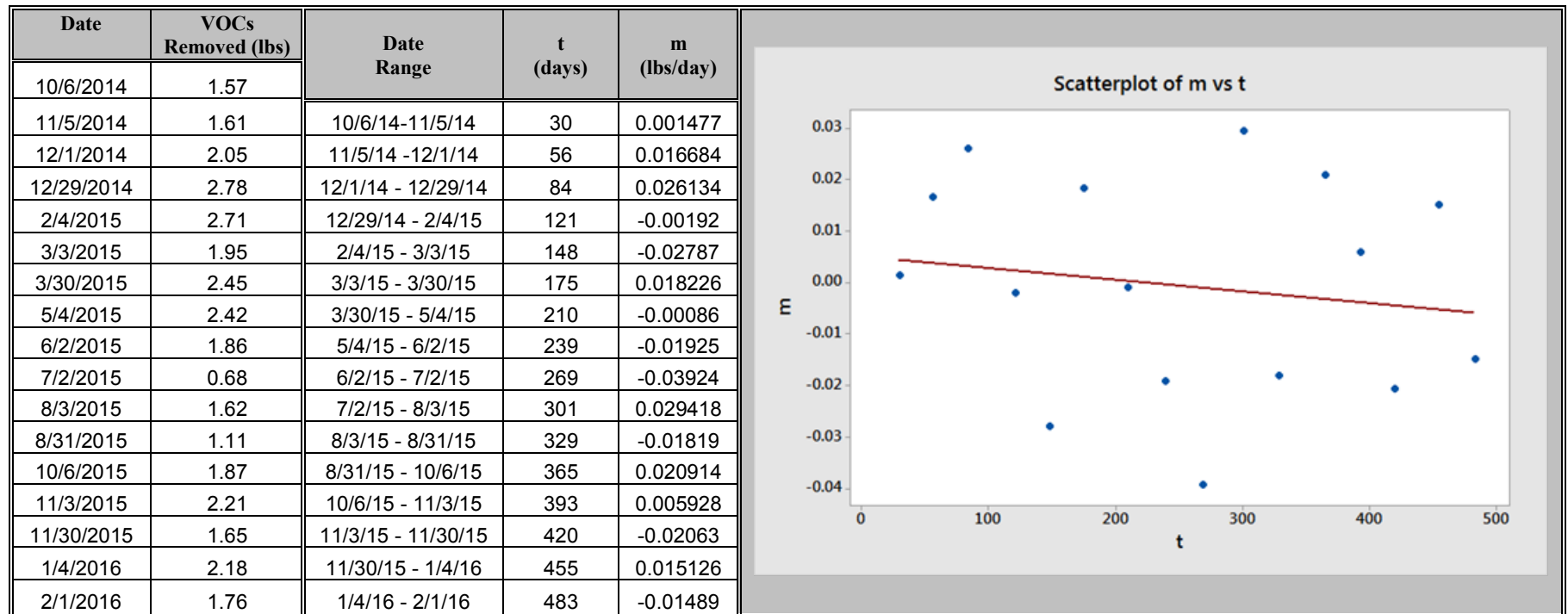
Attachment A - Minitab Project Report

Former Mr. C's Dry Cleaner's

NYSDEC Site Number 9-15-157

Statistical Analysis of Treatment Removal Rate

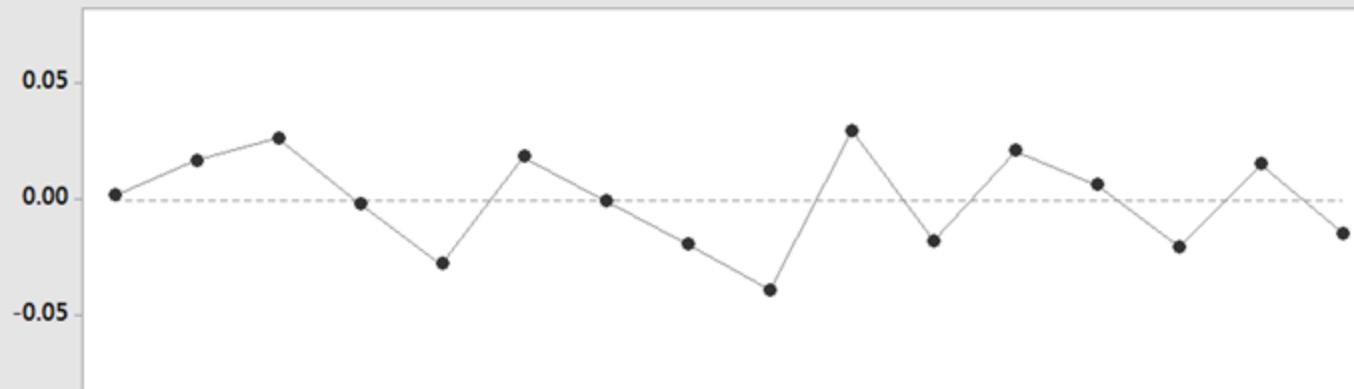
Student t-test and hypothesis Test on the slope to determine whether an asymptote (slope =0) has been reached



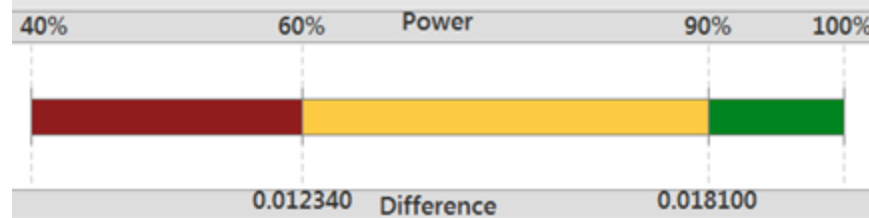
Attachment A - Minitab Project Report

1-Sample t Test for the Mean of m Diagnostic Report

Data in Worksheet Order
Investigate any outliers (marked in red).



What is the chance of detecting a difference?



For $\alpha = 0.05$ and sample size = 16:
if the true mean differed from the target by 0.012340 in either direction, you could have a 60% chance of detecting the difference. If it differed by 0.018100, you would have a 90% chance.

What difference can you detect with a sample size of 16?

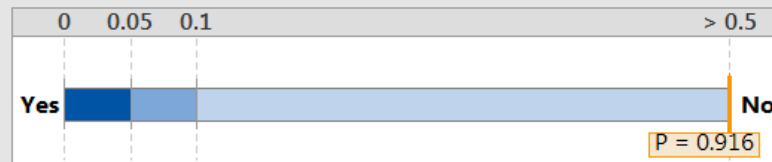
Difference	Power
0.012340	60%
0.013857	70%
0.015634	80%
0.018100	90%

Power is a function of the sample size and the standard deviation. To detect smaller differences, consider increasing the sample size.

Attachment A - Minitab Project Report

1-Sample t Test for the Mean of m Summary Report

Does the mean differ from 0?



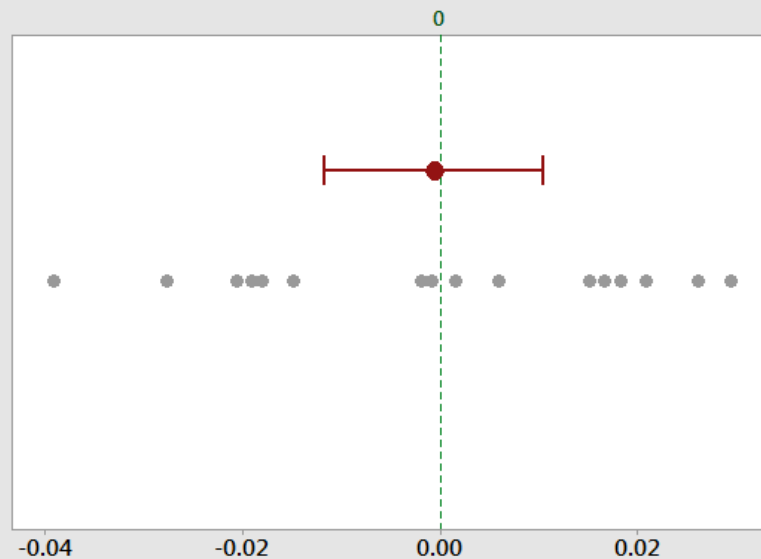
The mean of m is not significantly different from the target ($p > 0.05$).

Statistics

Sample size	16
Mean	-0.00055822
95% CI	(-0.011674, 0.010557)
Standard deviation	0.020860
Target	0

Distribution of Data

Where are the data relative to the target?



Comments

- Test: There is not enough evidence to conclude that the mean differs from 0 at the 0.05 level of significance.
- CI: Quantifies the uncertainty associated with estimating the mean from sample data. You can be 95% confident that the true mean is between -0.011674 and 0.010557.
- Distribution of Data: Compare the location of the data to the target. Look for unusual data before interpreting the test results.

Attachment A - Minitab Project Report

1-Sample t Test for the Mean of m Report Card

Check	Status	Description
Unusual Data		There are no unusual data points. Unusual data can have a strong influence on the results.
Normality		Because your sample size is less than 20, normality can be an issue. If the data are not normally distributed, the p-value may be inaccurate with small samples. Because normality cannot be reliably checked with small samples, you should use caution when interpreting the test results.
Sample Size		Your data does not provide sufficient evidence to conclude that the mean differs from the target. This may result from having a sample size that is too small. Based on your sample size, standard deviation, and α , you would have a 90% chance of detecting a difference of 0.018100. To determine how large your sample needs to be to detect a difference that has practical implications, repeat the analysis and enter a value for the difference.

B

Analytical Results of Samples from Pumping Wells

Laboratory Report

Ecology and Environment Engineering P.C.
368 Pleasant View Drive
Lancaster, NY 14086

Work Order: T0166
Project : Mr. C's Dry Cleaning
Project #: 1703074.0011.07

Attn: Michael Steffan

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
T0166-01	PW-4	Aqueous	02-Mar-17 10:30	03-Mar-17 10:30
T0166-02	PW-5	Aqueous	02-Mar-17 11:00	03-Mar-17 10:30
T0166-03	PW-6	Aqueous	02-Mar-17 11:30	03-Mar-17 10:30
T0166-04	PW-8	Aqueous	02-Mar-17 12:00	03-Mar-17 10:30

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the sample(s) as received. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

All applicable NELAP or USEPA CLP requirements have been met.

Use of the NELAP logo does not insure that Eurofins Spectrum Analytical is currently accredited for the specific test method or analyte. Please refer to our Quality page of our web site at www.EurofinsUS.com for the current list of certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Certification List:

Connecticut	PH-0153
Florida	E87664
Massachusetts	M-RI907
New Hampshire	2060
New Jersey	RI001
New York	11522
Rhode Island	LAI00349
USDA	P330-16-00031
USEPA - ISM	EP-W-14-032
USEPA - SOM	EP-W-14-032
Dod ELAP	L2247



Authorized by:

Dawn E Wojcik

Dawn Wojcik
Laboratory Director

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Identification and Analytical Requirements Summary

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0166

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
PW-4	T0166-01	SW8260_W				
PW-5	T0166-02	SW8260_W				
PW-6	T0166-03	SW8260_W				
PW-8	T0166-04	SW8260_W				

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0166

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_W					
T0166-01A	AQ	3/2/2017	3/3/2017	NA	3/7/2017
T0166-01ADL	AQ	3/2/2017	3/3/2017	NA	3/8/2017
T0166-02A	AQ	3/2/2017	3/3/2017	NA	3/7/2017
T0166-03A	AQ	3/2/2017	3/3/2017	NA	3/7/2017
T0166-04A	AQ	3/2/2017	3/3/2017	NA	3/7/2017

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0166

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_W					
T0166-01A	AQ	SW8260_W	NA	LOW	1
T0166-01ADL	AQ	SW8260_W	NA	LOW	50
T0166-02A	AQ	SW8260_W	NA	LOW	50
T0166-03A	AQ	SW8260_W	NA	LOW	50
T0166-04A	AQ	SW8260_W	NA	LOW	50

Client ID: ENE

Project: Mr. C's Dry Cleaning

WO Name: Mr. C's Dry Cleaning

Location: MR_C_COMPLIANCE, 1703074.0011.07

Comments: 1 ppb ICAL for VOA. Run Influent sample by 10 X dilution, low result in effluent expected. Upload EDD and report to www.lab.ene.com, have late pentaly, Special invoice paperwork required.

Case:

SDG:

PO: 4500000623-B

HC Due: 03/09/2017

Fax Due: 03/07/2017

Fax Report: ☒

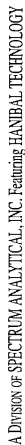
Report Level: ASP-A

Special Program:

EDD: EQUIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
T0166-01A	PW-4	03/02/2017 10:30	03/03/2017	Aqueous	SW8260_W	1 VOA vial broken / OLM_VOA,				Y	VOA
T0166-02A	PW-5	03/02/2017 11:00	03/03/2017	Aqueous	SW8260_W	1 VOA vial broken / OLM_VOA,				Y	VOA
T0166-03A	PW-6	03/02/2017 11:30	03/03/2017	Aqueous	SW8260_W	2 VOA vials broken / OLM_VOA,				Y	VOA
T0166-04A	PW-8	03/02/2017 12:00	03/03/2017	Aqueous	SW8260_W	/ OLM_VOA,				Y	VOA

Sample Transmittal Documentation



Page _____ of _____

Special Handling: Std

TAT- Indicate Date Needed: _____

- All TATs subject to laboratory approval
- Min. 24-hour notification needed for rush
- Samples disposed of after 30 days unless otherwise instructed.

Report To: E & E Inc
368 Pleasantview Dr
Lancaster, NY 14086
Telephone #: (716) 684-8060
Project Mgr.: Mike Steffen

Invoice To: EE E, Inc

Project No.: _____
Site Name: Mr Cs OMEM
Location: East Avery State: NY
Sampler(s): R. Allen

P.O. No.:
RON:

1= $\text{Na}_2\text{S}_2\text{O}_3$ 2= HCl 3= H_2SO_4 4= HNO_3 5= NaOH 6=Ascorbic Acid 7= CH_3OH
8= NaHSO_4 9= 10= 11=

List preservative code below:

Notes:

DW=Drinking Water GW=Groundwater WW=Wastewater
 OO=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
 X1= X2= X3=

7/21/62

Type	G=Grab	C=Composite	Matrix
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
7	7	7	7
8	8	8	8
9	9	9	9
10	10	10	10
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96	96	96	96
97	97	97	97
98	98	98	98
99	99	99	99
100	100	100	100

Containers:

Analyses:

QA/QC Reporting Level

☐ Level I ☐ Level II

☐ Level III ☐ Level IV

☒ Other Cat A

State specific reporting standards:

Page 3 of 42

175 Metro Center Boulevard • Warwick, RI 02886-1755 • 401-732-3400 • Fax 401-732-3499 • www.mitkem.com

Eurofins Spectrum Analytical, Inc. RI Sample Condition Notification

Project#: R T0166
Client: E+E
Client project #/name: Mr Cs

Date of Receipt: 3/3/17
Received By: (SB)

Unusual Occurance Description:

PW-4 : 1 vial broken

PW-5 : 1 vial broken

PW-6 : 1 vial broken - 1 vial, cap is broken

Client Contacted:

Contacted via: Phone/Fax/E-mail

Date: 3/6 Time: _____

Contacted By: Sgmo

Name of person contacted: Mike / Dharma

Client Response:

Responded via: Phone/Fax/E-mail

Date: _____

Name of person responding: _____

Responding to: _____

Action Taken:

Sufficient sample volume for analysis

* Volatiles *

REPORT NARRATIVE

Eurofins Spectrum Analytical, Inc.

Client : Ecology and Environment Engineering P.C.

Project: Mr. C's Dry Cleaning

Laboratory Workorder / SDG #: T0166

SW846 8260C, VOC by GC-MS (Trace)

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V10
Instrument Type: GCMS-VOA
Description: HP7890A
Manufacturer: Agilent
Model: 7890A / 5975C
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624
capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria. The Q flag indicates a compound that has associated continuing calibration verification (CCV) with a percent difference or percent drift above the control limit.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

PW-4 (T0166-01ADL) : Dilution Factor: 50
PW-5 (T0166-02A) : Dilution Factor: 50

PW-6 (T0166-03A) : Dilution Factor: 50
PW-8 (T0166-04A) : Dilution Factor: 50

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Eurofins Spectrum Analytical, Inc. RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed: _____

Date: 3/9/17

Data Flag/Qualifiers (Page 1 of 2):

- U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).
- J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
 - estimated concentration for Tentatively Identified Compound
- B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a “trace” concentration below the reporting limit and equal to or above the detection limit.
- D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis
- E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.
- P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.
- A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

- N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.
- * For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.
- L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

- DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution
- RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.
- RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.
- RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.
- MS Matrix Spike.
- MSD Matrix Spike Duplicate
- DUP Duplicate analysis
- SD Serial Dilution
- PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
LCS-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86458
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1963.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/07/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	49	
74-87-3	Chloromethane	55	
75-01-4	Vinyl chloride	53	
74-83-9	Bromomethane	56	
75-00-3	Chloroethane	55	
75-69-4	Trichlorofluoromethane	51	
75-35-4	1,1-Dichloroethene	51	
67-64-1	Acetone	37	Q
75-15-0	Carbon disulfide	42	
75-09-2	Methylene chloride	52	
156-60-5	trans-1,2-Dichloroethene	50	
1634-04-4	Methyl tert-butyl ether	51	
75-34-3	1,1-Dichloroethane	53	
78-93-3	2-Butanone	48	
156-59-2	cis-1,2-Dichloroethene	53	
67-66-3	Chloroform	52	
71-55-6	1,1,1-Trichloroethane	48	
56-23-5	Carbon tetrachloride	48	
107-06-2	1,2-Dichloroethane	55	
71-43-2	Benzene	53	
79-01-6	Trichloroethene	48	
78-87-5	1,2-Dichloropropane	55	
75-27-4	Bromodichloromethane	54	
10061-01-5	cis-1,3-Dichloropropene	55	
108-10-1	4-Methyl-2-pentanone	64	Q
108-88-3	Toluene	51	
10061-02-6	trans-1,3-Dichloropropene	53	
79-00-5	1,1,2-Trichloroethane	54	
127-18-4	Tetrachloroethene	43	
591-78-6	2-Hexanone	55	
124-48-1	Dibromochloromethane	51	
106-93-4	1,2-Dibromoethane	51	
108-90-7	Chlorobenzene	48	
100-41-4	Ethylbenzene	48	
1330-20-7	Xylene (Total)	140	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
LCS-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86458
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1963.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/07/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	50	
75-25-2	Bromoform	52	
98-82-8	Isopropylbenzene	47	
79-34-5	1,1,2,2-Tetrachloroethane	55	
541-73-1	1,3-Dichlorobenzene	47	
106-46-7	1,4-Dichlorobenzene	46	
95-50-1	1,2-Dichlorobenzene	47	
96-12-8	1,2-Dibromo-3-chloropropane	51	
120-82-1	1,2,4-Trichlorobenzene	44	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	53	
110-82-7	Cyclohexane	51	
79-20-9	Methyl acetate	62	
108-87-2	Methylcyclohexane	50	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCS-86485

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86485
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2012.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/08/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	57	Q
74-87-3	Chloromethane	48	
75-01-4	Vinyl chloride	44	
74-83-9	Bromomethane	41	Q
75-00-3	Chloroethane	44	
75-69-4	Trichlorofluoromethane	49	
75-35-4	1,1-Dichloroethene	44	
67-64-1	Acetone	55	Q
75-15-0	Carbon disulfide	50	
75-09-2	Methylene chloride	52	
156-60-5	trans-1,2-Dichloroethene	48	
1634-04-4	Methyl tert-butyl ether	53	
75-34-3	1,1-Dichloroethane	48	
78-93-3	2-Butanone	57	Q
156-59-2	cis-1,2-Dichloroethene	50	
67-66-3	Chloroform	47	
71-55-6	1,1,1-Trichloroethane	45	
56-23-5	Carbon tetrachloride	45	
107-06-2	1,2-Dichloroethane	48	
71-43-2	Benzene	48	
79-01-6	Trichloroethene	50	
78-87-5	1,2-Dichloropropane	49	
75-27-4	Bromodichloromethane	48	
10061-01-5	cis-1,3-Dichloropropene	46	
108-10-1	4-Methyl-2-pentanone	51	
108-88-3	Toluene	48	
10061-02-6	trans-1,3-Dichloropropene	45	
79-00-5	1,1,2-Trichloroethane	52	
127-18-4	Tetrachloroethene	49	
591-78-6	2-Hexanone	53	
124-48-1	Dibromochloromethane	49	
106-93-4	1,2-Dibromoethane	55	
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	52	
1330-20-7	Xylene (Total)	160	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
LCS-86485

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86485
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2012.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/08/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-42-5	Styrene	51	
75-25-2	Bromoform	36	Q
98-82-8	Isopropylbenzene	52	
79-34-5	1,1,2,2-Tetrachloroethane	54	
541-73-1	1,3-Dichlorobenzene	49	
106-46-7	1,4-Dichlorobenzene	51	
95-50-1	1,2-Dichlorobenzene	53	
96-12-8	1,2-Dibromo-3-chloropropane	51	
120-82-1	1,2,4-Trichlorobenzene	58	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	52	
110-82-7	Cyclohexane	59	Q
79-20-9	Methyl acetate	51	
108-87-2	Methylcyclohexane	65	Q

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

LCSD-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86458

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1964.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 03/07/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	45	
74-87-3	Chloromethane	47	
75-01-4	Vinyl chloride	47	
74-83-9	Bromomethane	47	
75-00-3	Chloroethane	48	
75-69-4	Trichlorofluoromethane	47	
75-35-4	1,1-Dichloroethene	43	
67-64-1	Acetone	36	Q
75-15-0	Carbon disulfide	38	
75-09-2	Methylene chloride	47	
156-60-5	trans-1,2-Dichloroethene	45	
1634-04-4	Methyl tert-butyl ether	47	
75-34-3	1,1-Dichloroethane	47	
78-93-3	2-Butanone	45	
156-59-2	cis-1,2-Dichloroethene	48	
67-66-3	Chloroform	47	
71-55-6	1,1,1-Trichloroethane	44	
56-23-5	Carbon tetrachloride	44	
107-06-2	1,2-Dichloroethane	50	
71-43-2	Benzene	48	
79-01-6	Trichloroethene	43	
78-87-5	1,2-Dichloropropane	51	
75-27-4	Bromodichloromethane	49	
10061-01-5	cis-1,3-Dichloropropene	50	
108-10-1	4-Methyl-2-pentanone	61	Q
108-88-3	Toluene	46	
10061-02-6	trans-1,3-Dichloropropene	49	
79-00-5	1,1,2-Trichloroethane	50	
127-18-4	Tetrachloroethene	39	
591-78-6	2-Hexanone	51	
124-48-1	Dibromochloromethane	48	
106-93-4	1,2-Dibromoethane	48	
108-90-7	Chlorobenzene	44	
100-41-4	Ethylbenzene	43	
1330-20-7	Xylene (Total)	130	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
LCSD-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86458
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1964.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/07/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	45	
75-25-2	Bromoform	48	
98-82-8	Isopropylbenzene	42	
79-34-5	1,1,2,2-Tetrachloroethane	52	
541-73-1	1,3-Dichlorobenzene	42	
106-46-7	1,4-Dichlorobenzene	42	
95-50-1	1,2-Dichlorobenzene	43	
96-12-8	1,2-Dibromo-3-chloropropane	46	
120-82-1	1,2,4-Trichlorobenzene	39	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	48	
110-82-7	Cyclohexane	47	
79-20-9	Methyl acetate	60	
108-87-2	Methylcyclohexane	46	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86458

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1966.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/07/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (Total)	1.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
MB-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86458
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1966.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/07/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
110-82-7	Cyclohexane	1.0	U
79-20-9	Methyl acetate	1.0	U
108-87-2	Methylcyclohexane	1.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MB-86485

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86485

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2016.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 03/08/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (Total)	1.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
MB-86485

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86485
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2016.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/08/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
110-82-7	Cyclohexane	1.0	U
79-20-9	Methyl acetate	1.0	U
108-87-2	Methylcyclohexane	1.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1972.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017

% Moisture: not dec. Date Analyzed: 03/07/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.6	
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	42	
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	150	
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1900	E
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (Total)	1.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-01A
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1972.D
Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017
% Moisture: not dec. Date Analyzed: 03/07/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
110-82-7	Cyclohexane	1.0	U
79-20-9	Methyl acetate	1.0	U
108-87-2	Methylcyclohexane	1.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-4DL

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-01ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2019.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017

% Moisture: not dec. Date Analyzed: 03/08/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	50	U
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-69-4	Trichlorofluoromethane	50	U
75-35-4	1,1-Dichloroethene	50	U
67-64-1	Acetone	250	U
75-15-0	Carbon disulfide	50	U
75-09-2	Methylene chloride	50	U
156-60-5	trans-1,2-Dichloroethene	50	U
1634-04-4	Methyl tert-butyl ether	50	U
75-34-3	1,1-Dichloroethane	50	U
78-93-3	2-Butanone	250	U
156-59-2	cis-1,2-Dichloroethene	77	D
67-66-3	Chloroform	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon tetrachloride	50	U
107-06-2	1,2-Dichloroethane	50	U
71-43-2	Benzene	50	U
79-01-6	Trichloroethene	190	D
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-10-1	4-Methyl-2-pentanone	250	U
108-88-3	Toluene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
79-00-5	1,1,2-Trichloroethane	50	U
127-18-4	Tetrachloroethene	2700	D
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	50	U
106-93-4	1,2-Dibromoethane	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
1330-20-7	Xylene (Total)	50	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-4DL

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-01ADL
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2019.D
Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017
% Moisture: not dec. Date Analyzed: 03/08/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	50	U
75-25-2	Bromoform	50	U
98-82-8	Isopropylbenzene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	50	U
110-82-7	Cyclohexane	50	U
79-20-9	Methyl acetate	50	U
108-87-2	Methylcyclohexane	50	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-02A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1983.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017

% Moisture: not dec. Date Analyzed: 03/07/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	50	U
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-69-4	Trichlorofluoromethane	50	U
75-35-4	1,1-Dichloroethene	50	U
67-64-1	Acetone	250	U
75-15-0	Carbon disulfide	50	U
75-09-2	Methylene chloride	50	U
156-60-5	trans-1,2-Dichloroethene	50	U
1634-04-4	Methyl tert-butyl ether	50	U
75-34-3	1,1-Dichloroethane	50	U
78-93-3	2-Butanone	250	U
156-59-2	cis-1,2-Dichloroethene	170	
67-66-3	Chloroform	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon tetrachloride	50	U
107-06-2	1,2-Dichloroethane	50	U
71-43-2	Benzene	50	U
79-01-6	Trichloroethene	110	
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-10-1	4-Methyl-2-pentanone	250	U
108-88-3	Toluene	39	J
10061-02-6	trans-1,3-Dichloropropene	50	U
79-00-5	1,1,2-Trichloroethane	50	U
127-18-4	Tetrachloroethene	2000	
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	50	U
106-93-4	1,2-Dibromoethane	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
1330-20-7	Xylene (Total)	50	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-02A
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1983.D
Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017
% Moisture: not dec. Date Analyzed: 03/07/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	50	U
75-25-2	Bromoform	50	U
98-82-8	Isopropylbenzene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	50	U
110-82-7	Cyclohexane	50	U
79-20-9	Methyl acetate	50	U
108-87-2	Methylcyclohexane	50	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1982.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017

% Moisture: not dec. Date Analyzed: 03/07/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	50	U
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-69-4	Trichlorofluoromethane	50	U
75-35-4	1,1-Dichloroethene	50	U
67-64-1	Acetone	250	U
75-15-0	Carbon disulfide	50	U
75-09-2	Methylene chloride	50	U
156-60-5	trans-1,2-Dichloroethene	50	U
1634-04-4	Methyl tert-butyl ether	50	U
75-34-3	1,1-Dichloroethane	50	U
78-93-3	2-Butanone	250	U
156-59-2	cis-1,2-Dichloroethene	38	J
67-66-3	Chloroform	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon tetrachloride	50	U
107-06-2	1,2-Dichloroethane	50	U
71-43-2	Benzene	50	U
79-01-6	Trichloroethene	120	
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-10-1	4-Methyl-2-pentanone	250	U
108-88-3	Toluene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
79-00-5	1,1,2-Trichloroethane	50	U
127-18-4	Tetrachloroethene	1800	
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	50	U
106-93-4	1,2-Dibromoethane	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
1330-20-7	Xylene (Total)	50	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-03A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1982.D
 Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017
 % Moisture: not dec. Date Analyzed: 03/07/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	50	U
75-25-2	Bromoform	50	U
98-82-8	Isopropylbenzene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	50	U
110-82-7	Cyclohexane	50	U
79-20-9	Methyl acetate	50	U
108-87-2	Methylcyclohexane	50	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-04A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1984.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017

% Moisture: not dec. Date Analyzed: 03/07/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	50	U
74-87-3	Chloromethane	50	U
75-01-4	Vinyl chloride	50	U
74-83-9	Bromomethane	50	U
75-00-3	Chloroethane	50	U
75-69-4	Trichlorofluoromethane	50	U
75-35-4	1,1-Dichloroethene	50	U
67-64-1	Acetone	250	U
75-15-0	Carbon disulfide	50	U
75-09-2	Methylene chloride	50	U
156-60-5	trans-1,2-Dichloroethene	50	U
1634-04-4	Methyl tert-butyl ether	50	U
75-34-3	1,1-Dichloroethane	50	U
78-93-3	2-Butanone	250	U
156-59-2	cis-1,2-Dichloroethene	87	
67-66-3	Chloroform	50	U
71-55-6	1,1,1-Trichloroethane	50	U
56-23-5	Carbon tetrachloride	50	U
107-06-2	1,2-Dichloroethane	50	U
71-43-2	Benzene	50	U
79-01-6	Trichloroethene	73	
78-87-5	1,2-Dichloropropane	50	U
75-27-4	Bromodichloromethane	50	U
10061-01-5	cis-1,3-Dichloropropene	50	U
108-10-1	4-Methyl-2-pentanone	250	U
108-88-3	Toluene	50	U
10061-02-6	trans-1,3-Dichloropropene	50	U
79-00-5	1,1,2-Trichloroethane	50	U
127-18-4	Tetrachloroethene	2100	
591-78-6	2-Hexanone	250	U
124-48-1	Dibromochloromethane	50	U
106-93-4	1,2-Dibromoethane	50	U
108-90-7	Chlorobenzene	50	U
100-41-4	Ethylbenzene	50	U
1330-20-7	Xylene (Total)	50	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0166-04A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E1984.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/03/2017

% Moisture: not dec. Date Analyzed: 03/07/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 50.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	50	U
75-25-2	Bromoform	50	U
98-82-8	Isopropylbenzene	50	U
79-34-5	1,1,2,2-Tetrachloroethane	50	U
541-73-1	1,3-Dichlorobenzene	50	U
106-46-7	1,4-Dichlorobenzene	50	U
95-50-1	1,2-Dichlorobenzene	50	U
96-12-8	1,2-Dibromo-3-chloropropane	50	U
120-82-1	1,2,4-Trichlorobenzene	50	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	50	U
110-82-7	Cyclohexane	50	U
79-20-9	Methyl acetate	50	U
108-87-2	Methylcyclohexane	50	U

2B - FORM II VOA-2
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166

Level: (TRACE or LOW) LOW

	CLIENT SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-86458	102	102	98	103				0
02	LCSD-86458	102	99	99	102				0
03	MB-86458	101	99	98	101				0
04	PW-4	95	98	106	95				0
05	PW-6	99	98	105	97				0
06	PW-5	98	96	106	95				0
07	PW-8	99	100	107	95				0
08	LCS-86485	98	98	100	99				0
09	MB-86485	97	100	98	95				0
10	PW-4DL	98	101	100	97				0

VDMC1 (DBFM) Dibromofluoromethane
VDMC2 (DCE) = 1,2-Dichloroethane-d4
VDMC3 (TOL) = Toluene-d8
VDMC4 (BFB) = Bromofluorobenzene

QC LIMITS
(85-115)
(70-120)
(85-120)
(75-120)

Column to be used to flag recovery values

* Values outside of contract required QC limits

som15.09.23.1015

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: SDG No.: ST0166

Lab Sample ID: LCS-86458 LCS Lot No.:

Date Extracted: 03/06/2017 Date Analyzed (1): 03/07/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	49.4893	99		30 - 155
Chloromethane	50.0000	0.0000	55.2445	110		40 - 125
Vinyl chloride	50.0000	0.0000	53.1921	106		50 - 145
Bromomethane	50.0000	0.0000	55.7826	112		30 - 145
Chloroethane	50.0000	0.0000	55.3572	111		60 - 135
Trichlorofluoromethane	50.0000	0.0000	51.1008	102		60 - 145
1,1-Dichloroethene	50.0000	0.0000	50.7494	101		70 - 130
Acetone	50.0000	0.0000	37.0978	74		40 - 140
Carbon disulfide	50.0000	0.0000	41.9413	84		35 - 160
Methylene chloride	50.0000	0.0000	52.0667	104		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	50.1510	100		60 - 140
Methyl tert-butyl ether	50.0000	0.0000	51.1657	102		65 - 125
1,1-Dichloroethane	50.0000	0.0000	53.2015	106		70 - 135
2-Butanone	50.0000	0.0000	47.9674	96		30 - 150
cis-1,2-Dichloroethene	50.0000	0.0000	53.2468	106		70 - 125
Chloroform	50.0000	0.0000	52.4923	105		65 - 135
1,1,1-Trichloroethane	50.0000	0.0000	47.9755	96		65 - 130
Carbon tetrachloride	50.0000	0.0000	48.2230	96		65 - 140
1,2-Dichloroethane	50.0000	0.0000	55.1369	110		70 - 130
Benzene	50.0000	0.0000	52.6757	105		80 - 120
Trichloroethene	50.0000	0.0000	48.0406	96		70 - 125
1,2-Dichloropropane	50.0000	0.0000	55.2944	111		75 - 125
Bromodichloromethane	50.0000	0.0000	53.8897	108		75 - 120
cis-1,3-Dichloropropene	50.0000	0.0000	55.3003	111		70 - 130
4-Methyl-2-pentanone	50.0000	0.0000	64.3305	129		60 - 135
Toluene	50.0000	0.0000	50.6127	101		75 - 120
trans-1,3-Dichloropropene	50.0000	0.0000	52.8841	106		55 - 140
1,1,2-Trichloroethane	50.0000	0.0000	53.6762	107		75 - 125
Tetrachloroethene	50.0000	0.0000	42.9502	86		45 - 150
2-Hexanone	50.0000	0.0000	54.6081	109		55 - 130
Dibromochloromethane	50.0000	0.0000	51.0999	102		60 - 135
1,2-Dibromoethane	50.0000	0.0000	51.2858	103		80 - 120
Chlorobenzene	50.0000	0.0000	48.4344	97		80 - 120
Ethylbenzene	50.0000	0.0000	47.6972	95		75 - 125
Xylene (Total)	150.0000	0.0000	142.9706	95		81 - 121
Styrene	50.0000	0.0000	49.6194	99		65 - 135
Bromoform	50.0000	0.0000	51.8609	104		70 - 130
Isopropylbenzene	50.0000	0.0000	46.5141	93		75 - 125
1,1,2,2-Tetrachloroethane	50.0000	0.0000	55.3223	111		65 - 130
1,3-Dichlorobenzene	50.0000	0.0000	46.5518	93		75 - 125
1,4-Dichlorobenzene	50.0000	0.0000	46.0624	92		75 - 125
1,2-Dichlorobenzene	50.0000	0.0000	47.1866	94		70 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	50.7463	101		50 - 130
1,2,4-Trichlorobenzene	50.0000	0.0000	44.0732	88		65 - 135

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Lab Sample ID: LCS-86458 LCS Lot No.: _____
Date Extracted: 03/06/2017 Date Analyzed (1): 03/07/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
1,1,2-Trichloro-1,2,2-trif	50.0000	0.0000	52.6520	105		70 - 130
Cyclohexane	50.0000	0.0000	50.8507	102		70 - 130
Methyl acetate	50.0000	0.0000	62.1052	124		70 - 130
Methylcyclohexane	50.0000	0.0000	50.2958	101		70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS: _____

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-86485

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: SDG No.: ST0166

Lab Sample ID: LCS-86485 LCS Lot No.:

Date Extracted: 03/08/2017 Date Analyzed (1): 03/08/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	57.1965	114		30 - 155
Chloromethane	50.0000	0.0000	48.3692	97		40 - 125
Vinyl chloride	50.0000	0.0000	43.5186	87		50 - 145
Bromomethane	50.0000	0.0000	40.6775	81		30 - 145
Chloroethane	50.0000	0.0000	43.7010	87		60 - 135
Trichlorofluoromethane	50.0000	0.0000	48.6722	97		60 - 145
1,1-Dichloroethene	50.0000	0.0000	43.9210	88		70 - 130
Acetone	50.0000	0.0000	54.9883	110		40 - 140
Carbon disulfide	50.0000	0.0000	49.7116	99		35 - 160
Methylene chloride	50.0000	0.0000	52.4372	105		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	48.4163	97		60 - 140
Methyl tert-butyl ether	50.0000	0.0000	52.5086	105		65 - 125
1,1-Dichloroethane	50.0000	0.0000	47.5764	95		70 - 135
2-Butanone	50.0000	0.0000	56.7755	114		30 - 150
cis-1,2-Dichloroethene	50.0000	0.0000	50.1594	100		70 - 125
Chloroform	50.0000	0.0000	46.8720	94		65 - 135
1,1,1-Trichloroethane	50.0000	0.0000	44.9975	90		65 - 130
Carbon tetrachloride	50.0000	0.0000	45.0934	90		65 - 140
1,2-Dichloroethane	50.0000	0.0000	47.5477	95		70 - 130
Benzene	50.0000	0.0000	48.4155	97		80 - 120
Trichloroethene	50.0000	0.0000	49.9976	100		70 - 125
1,2-Dichloropropane	50.0000	0.0000	49.4186	99		75 - 125
Bromodichloromethane	50.0000	0.0000	47.9367	96		75 - 120
cis-1,3-Dichloropropene	50.0000	0.0000	46.2249	92		70 - 130
4-Methyl-2-pentanone	50.0000	0.0000	51.0529	102		60 - 135
Toluene	50.0000	0.0000	48.4745	97		75 - 120
trans-1,3-Dichloropropene	50.0000	0.0000	44.9804	90		55 - 140
1,1,2-Trichloroethane	50.0000	0.0000	52.0538	104		75 - 125
Tetrachloroethene	50.0000	0.0000	48.5371	97		45 - 150
2-Hexanone	50.0000	0.0000	52.7098	105		55 - 130
Dibromochloromethane	50.0000	0.0000	48.5436	97		60 - 135
1,2-Dibromoethane	50.0000	0.0000	54.7172	109		80 - 120
Chlorobenzene	50.0000	0.0000	49.2867	99		80 - 120
Ethylbenzene	50.0000	0.0000	51.9315	104		75 - 125
Xylene (Total)	150.0000	0.0000	155.8802	104		81 - 121
Styrene	50.0000	0.0000	51.3972	103		65 - 135
Bromoform	50.0000	0.0000	36.4850	73		70 - 130
Isopropylbenzene	50.0000	0.0000	51.9236	104		75 - 125
1,1,2,2-Tetrachloroethane	50.0000	0.0000	53.9615	108		65 - 130
1,3-Dichlorobenzene	50.0000	0.0000	49.4884	99		75 - 125
1,4-Dichlorobenzene	50.0000	0.0000	50.7327	101		75 - 125
1,2-Dichlorobenzene	50.0000	0.0000	53.2038	106		70 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	50.8142	102		50 - 130
1,2,4-Trichlorobenzene	50.0000	0.0000	57.6979	115		65 - 135

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

CLIENT SAMPLE NO.

LCS-86485

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Lab Sample ID: LCS-86485 LCS Lot No.: _____
Date Extracted: 03/08/2017 Date Analyzed (1): 03/08/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
1,1,2-Trichloro-1,2,2-trif	50.0000	0.0000	52.3980	105		70 - 130
Cyclohexane	50.0000	0.0000	59.0659	118		70 - 130
Methyl acetate	50.0000	0.0000	50.5034	101		70 - 130
Methylcyclohexane	50.0000	0.0000	64.8933	130		70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS: _____

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0166

Mod. Ref No.:

SDG No.: ST0166

Lab Sample ID: LCSD-86458

LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS	
							RPD	REC.
Dichlorodifluoromethane	50.0000	44.8055	90		10		30	30 - 155
Chloromethane	50.0000	47.1521	94		16		30	40 - 125
Vinyl chloride	50.0000	47.2373	94		12		30	50 - 145
Bromomethane	50.0000	46.8179	94		17		30	30 - 145
Chloroethane	50.0000	47.8075	96		14		30	60 - 135
Trichlorofluoromethane	50.0000	46.6019	93		9		30	60 - 145
1,1-Dichloroethene	50.0000	43.1985	86		16		30	70 - 130
Acetone	50.0000	36.1076	72		3		30	40 - 140
Carbon disulfide	50.0000	38.3981	77		9		30	35 - 160
Methylene chloride	50.0000	47.0434	94		10		30	55 - 140
trans-1,2-Dichloroethene	50.0000	45.4653	91		9		30	60 - 140
Methyl tert-butyl ether	50.0000	47.3272	95		7		30	65 - 125
1,1-Dichloroethane	50.0000	47.3025	95		11		30	70 - 135
2-Butanone	50.0000	45.2924	91		5		30	30 - 150
cis-1,2-Dichloroethene	50.0000	48.0329	96		10		30	70 - 125
Chloroform	50.0000	47.4466	95		10		30	65 - 135
1,1,1-Trichloroethane	50.0000	43.7071	87		10		30	65 - 130
Carbon tetrachloride	50.0000	43.7702	88		9		30	65 - 140
1,2-Dichloroethane	50.0000	50.4966	101		9		30	70 - 130
Benzene	50.0000	47.6766	95		10		30	80 - 120
Trichloroethene	50.0000	42.6144	85		12		30	70 - 125
1,2-Dichloropropane	50.0000	50.5414	101		9		30	75 - 125
Bromodichloromethane	50.0000	48.9648	98		10		30	75 - 120
cis-1,3-Dichloropropene	50.0000	50.1229	100		10		30	70 - 130
4-Methyl-2-pentanone	50.0000	60.8911	122		6		30	60 - 135
Toluene	50.0000	46.0657	92		9		30	75 - 120
trans-1,3-Dichloropropene	50.0000	48.7677	98		8		30	55 - 140
1,1,2-Trichloroethane	50.0000	50.2381	100		7		30	75 - 125
Tetrachloroethene	50.0000	39.3833	79		8		30	45 - 150
2-Hexanone	50.0000	51.0374	102		7		30	55 - 130
Dibromochloromethane	50.0000	47.5001	95		7		30	60 - 135
1,2-Dibromoethane	50.0000	47.7468	95		8		30	80 - 120
Chlorobenzene	50.0000	44.4840	89		9		30	80 - 120
Ethylbenzene	50.0000	43.1751	86		10		30	75 - 125
Xylene (Total)	150.0000	129.9617	87		9		30	81 - 121
Styrene	50.0000	44.7630	90		10		30	65 - 135
Bromoform	50.0000	47.9567	96		8		30	70 - 130
Isopropylbenzene	50.0000	42.1641	84		10		30	75 - 125
1,1,2,2-Tetrachloroethane	50.0000	52.0756	104		7		30	65 - 130
1,3-Dichlorobenzene	50.0000	41.9633	84		10		30	75 - 125
1,4-Dichlorobenzene	50.0000	42.0465	84		9		30	75 - 125
1,2-Dichlorobenzene	50.0000	42.7693	86		9		30	70 - 120
1,2-Dibromo-3-chloropropan	50.0000	46.3190	93		8		30	50 - 130
1,2,4-Trichlorobenzene	50.0000	38.9039	78		12		30	65 - 135
1,1,2-Trichloro-1,2,2-trif	50.0000	47.8779	96		9		30	70 - 130
Cyclohexane	50.0000	47.2310	94		8		30	70 - 130

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Lab Sample ID: LCSD-86458 LCS Lot No.: _____

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS	
							RPD	REC.
Methyl acetate	50.0000	59.8669	120		3		30	70 - 130
Methylcyclohexane	50.0000	46.4677	93		8		30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 48 outside limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS: _____

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-86458

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Lab File ID: V8E1966.D Lab Sample ID: MB-86458
Instrument ID: V10
Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 03/07/2017
Level: (TRACE or LOW/MED) LOW Time Analyzed: 11:41
GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-86458	LCS-86458	V8E1963.D	10:13
02	LCSD-86458	LCSD-86458	V8E1964.D	10:43
03	PW-4	T0166-01A	V8E1972.D	15:05
04	PW-6	T0166-03A	V8E1982.D	19:57
05	PW-5	T0166-02A	V8E1983.D	20:26
06	PW-8	T0166-04A	V8E1984.D	20:55

COMMENTS: _____

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO.

MB-86485

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0166 Mod. Ref No.: _____ SDG No.: ST0166
Lab File ID: V8E2016.D Lab Sample ID: MB-86485
Instrument ID: V10
Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 03/08/2017
Level: (TRACE or LOW/MED) LOW Time Analyzed: 13:19
GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-86485	LCS-86485	V8E2012.D	11:06
02	PW-4DL	T0166-01ADL	V8E2019.D	14:47

COMMENTS: _____

Last Page of Data Report

Laboratory Report

Ecology and Environment Engineering P.C.
 368 Pleasant View Drive
 Lancaster, NY 14086

Work Order: T0206
 Project : Mr. C's Dry Cleaning
 Project #: 1703074.0011.07

Attn: Michael Steffan

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
T0206-01	PW-4	Aqueous	21-Mar-17 10:30	22-Mar-17 10:25
T0206-02	PW-5	Aqueous	21-Mar-17 11:00	22-Mar-17 10:25
T0206-03	PW-6	Aqueous	21-Mar-17 11:30	22-Mar-17 10:25
T0206-04	PW-7	Aqueous	21-Mar-17 12:00	22-Mar-17 10:25
T0206-05	PW-8	Aqueous	21-Mar-17 12:30	22-Mar-17 10:25

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the sample(s) as received. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

All applicable NELAP or USEPA CLP requirements have been met.

Use of the NELAP logo does not insure that Eurofins Spectrum Analytical is currently accredited for the specific test method or analyte. Please refer to our Quality page of our web site at www.EurofinsUS.com for the current list of certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Certification List:

Connecticut	PH-0153
Florida	E87664
Massachusetts	M-RI907
New Hampshire	2060
New Jersey	RI001
New York	11522
Rhode Island	LAI00349
USDA	P330-16-00031
USEPA - ISM	EP-W-14-032
USEPA - SOM	EP-W-14-032
Dod ELAP	L2247



Certificate # L2247 Testing

Authorized by:

Dawn E Wojcik

Dawn Wojcik
 Laboratory Director

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Identification and Analytical Requirements Summary

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0206

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
PW-4	T0206-01	SW8260_W				
PW-5	T0206-02	SW8260_W				
PW-6	T0206-03	SW8260_W				
PW-7	T0206-04	SW8260_W				
PW-8	T0206-05	SW8260_W				

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0206

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_W					
T0206-01A	AQ	3/21/2017	3/22/2017	NA	3/23/2017
T0206-02A	AQ	3/21/2017	3/22/2017	NA	3/23/2017
T0206-03A	AQ	3/21/2017	3/22/2017	NA	3/23/2017
T0206-04A	AQ	3/21/2017	3/22/2017	NA	3/23/2017
T0206-05A	AQ	3/21/2017	3/22/2017	NA	3/23/2017
T0206-05ADL	AQ	3/21/2017	3/22/2017	NA	3/23/2017

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0206

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_W					
T0206-01A	AQ	SW8260_W	NA	LOW	20
T0206-02A	AQ	SW8260_W	NA	LOW	20
T0206-03A	AQ	SW8260_W	NA	LOW	20
T0206-04A	AQ	SW8260_W	NA	LOW	40
T0206-05A	AQ	SW8260_W	NA	LOW	5
T0206-05ADL	AQ	SW8260_W	NA	LOW	20

Esurofins Spectrum Analytical, Inc. -- ESAI-RI

WorkOrder: T0206

Client ID: ENE

Project: Mr. C's Dry Cleaning

WO Name: Mr. C's Dry Cleaning

Location: MR_C_COMPLIANCE, 1703074.0011.07

Comments: 1 ppb ICAL for VOA. Run Influent sample by 10 X dilution, low result in effluent expected. Upload EDD and report to www.lab.ene.com, have late pentaly, Special invoice paperwork required.

Case:

SDG:

PO: 4500000623-B

HC Due: 03/28/2017

Fax Due: 03/24/2017

Fax Report: ☒

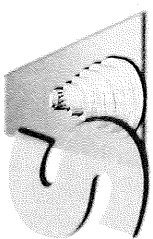
Report Level: ASP-A

Special Program:

EDD: EQUIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
T0206-01A	PW-4	03/21/2017 10:30	03/22/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0206-02A	PW-5	03/21/2017 11:00	03/22/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0206-03A	PW-6	03/21/2017 11:30	03/22/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0206-04A	PW-7	03/21/2017 12:00	03/22/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0206-05A	PW-8	03/21/2017 12:30	03/22/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA

Sample Transmittal Documentation



SPECTRUM ANALYTICAL, INC.
Featuring
HANIBAL TECHNOLOGY

Page 1 of 1

CHAIN OF CUSTODY RECORD

☐ 11 A Imgren Drive
Agawam, MA 01001
(413) 789-9018

☐ 8405 Benjamin Road, Ste A
Tampa, FL 33634
(813) 888-9507

☐ 646 Camp Avenue
N Kingstown, RI 02852
(401) 732-3400

Special Handling:

TAT- Ind icate Date Needed: Std
· All TATs subject to laboratory approval.
· Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: E & E, Inc
368 Pleasantview Dr
Lancaster, NY 14086

Telephone #: (716) 684-8060
Project Mgr. Mike Steffen

Invoice To: E & E, Inc

P.O. No.: _____ RQN: _____

Project No.: _____

Site Name: MrCs OM&M

Location: East Aurora State: NY

Sampler(s): R. Allen, D. Iyer

List preservative code below:

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8= NaHSO₄ 9= Deionized Water 10=H₃PO₄ 11= _____ 12= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW= Surface Water SO=Soil SL=Sludge A=Air
X1= _____ X2= _____ X3= _____

QA/QC Reporting Notes:

QA/QC Reporting Level
☐ Level I ☐ Level II
☐ Level III ☐ Level IV
☒ Other CAT A

State-specific reporting standards:

Analyses:

Containers:

of VOA Vials # of Amber Glass # of Clear Glass # of Plastic

Matrix

Type

Time:

Date:

TU206 G=Grab C=Composite

Sample Id:

Lab Id:

01 PW-4 Mar 21, 2017 10:30 A G GW 3

02 PW-5 11:00 A G GW 3

03 PW-6 11:30 A G GW 3

04 PW-7 12:00 P G GW 3

05 PW-8 12:30 P G GW 3

Relinquished by:

Received by:

Temp °C

Time:

Date:

EDD Format

E-mail to

Condition upon receipt: ☐ Ambient ☒ Iced ☐ Refrigerated ☐ DVOA Frozen ☐ Intact ☐ Broken ☐ Soil Jar Frozen

MLT-7Y

3/22/16

10:25am

48°C

-1.0°C

38°C

PDF

m.steffan@ene.com

Received By: <u>SB</u>		Page 01 of 00							
Reviewed By: <u>RA</u>		Log-in Date 03/22/2017							
Work Order: T0206		Client Name: Ecology and Environment Engineering P.C.							
Project Name/Event: Mr. C's Dry Cleaning / 1703074.0011.07									
Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.		Preservation (pH)		Soil HeadSpace or Air Bubble > or equal to 1/4"					
		Lab Sample ID	HNO3		H2SO4	HCl	NaOH	H3PO4	VOA Matrix
		T0206-01							H
		T0206-02							H
		T0206-03							H
		T0206-04							H
1. Custody Seal(s) <u>Present / Absent</u> <u>Intact / Broken</u>									
2. Custody Seal Nos. <u>N/A</u>									
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists <u>Present / Absent</u>									
4. Airbill <u>AirBill / Sticker</u> <u>Present / Absent</u>									
5. Airbill No. <u>FedEx 7787 0237 2988</u>									
6. Sample Tags <u>Present / Absent</u> Sample Tag Numbers <u>Listed /</u> <u>Not Listed on Chain-of-Custody</u>									
7. Sample Condition <u>Intact / Broken /</u> <u>Leaking</u>									
8. Cooler Temperature Indicator Bottle <u>Present / Absent</u>									
9. Cooler Temperature <u>3.8 °C</u>									
10. Does information on TR/COCs and sample tags agree? <u>Yes / No</u>									
11. Date Received at Laboratory <u>03/22/2017</u>									
12. Time Received <u>10:25</u>									
Sample Transfer									
Fraction (1) TVOA/VOA		Fraction (2) SVOA/PEST/ARO							
Area #		Area #							
By		By							
On		On							
IR Temp Gun ID: MT-74									
Coolant Condition: ICE									
Preservative Name/Lot No:									
VOA Matrix Key: US = Unpreserved Soil A = Air UA = Unpreserved Aqueous H = HCl M = MeOH E = Encore N = NaHSO4 F = Freeze See Sample Condition Notification/Corrective Action Form Yes / <u>No</u>									

*** Volatiles ***

REPORT NARRATIVE

Eurofins Spectrum Analytical, Inc.

Client : Ecology and Environment Engineering P.C.

Project: Mr. C's Dry Cleaning

Laboratory Workorder / SDG #: T0206

SW846 8260C, VOC by GC-MS (Trace)

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V10
Instrument Type: GCMS-VOA
Description: HP7890A
Manufacturer: Agilent
Model: 7890A / 5975C
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624
capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria. The Q flag indicates a compound that has associated continuing calibration verification (CCV) with a percent difference or percent drift above the control limit.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

LCS-86559 in batch 86559, recovery is above criteria for Methylcyclohexane at 152% with criteria of (70-130).

LCSD-86559 in batch 86559, recovery is above criteria for Methylcyclohexane at 155% with criteria of (70-130).

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

PW-4 (T0206-01A) : Dilution Factor: 20
PW-5 (T0206-02A) : Dilution Factor: 20
PW-6 (T0206-03A) : Dilution Factor: 20
PW-7 (T0206-04A) : Dilution Factor: 40
PW-8 (T0206-05A) : Dilution Factor: 5
PW-8 (T0206-05ADL) : Dilution Factor: 20

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Eurofins Spectrum Analytical, Inc. RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed: _____

Date: 3/27/17

Data Flag/Qualifiers (Page 1 of 2):

- U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).
- J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
 - estimated concentration for Tentatively Identified Compound
- B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a “trace” concentration below the reporting limit and equal to or above the detection limit.
- D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis
- E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.
- P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.
- A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

- N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.
- * For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.
- L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

- DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution
- RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.
- RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.
- RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.
- MS Matrix Spike.
- MSD Matrix Spike Duplicate
- DUP Duplicate analysis
- SD Serial Dilution
- PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86559
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2402.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/23/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	61	
74-87-3	Chloromethane	47	
75-01-4	Vinyl chloride	51	
74-83-9	Bromomethane	46	
75-00-3	Chloroethane	50	
75-69-4	Trichlorofluoromethane	57	
75-35-4	1,1-Dichloroethene	49	
67-64-1	Acetone	33	Q
75-15-0	Carbon disulfide	54	
75-09-2	Methylene chloride	49	
156-60-5	trans-1,2-Dichloroethene	51	
1634-04-4	Methyl tert-butyl ether	55	
75-34-3	1,1-Dichloroethane	50	
78-93-3	2-Butanone	40	Q
156-59-2	cis-1,2-Dichloroethene	53	
67-66-3	Chloroform	48	
71-55-6	1,1,1-Trichloroethane	52	
56-23-5	Carbon tetrachloride	53	
107-06-2	1,2-Dichloroethane	48	
71-43-2	Benzene	50	
79-01-6	Trichloroethene	54	
78-87-5	1,2-Dichloropropane	51	
75-27-4	Bromodichloromethane	52	
10061-01-5	cis-1,3-Dichloropropene	50	
108-10-1	4-Methyl-2-pentanone	50	
108-88-3	Toluene	53	
10061-02-6	trans-1,3-Dichloropropene	51	
79-00-5	1,1,2-Trichloroethane	52	
127-18-4	Tetrachloroethene	50	
591-78-6	2-Hexanone	47	
124-48-1	Dibromochloromethane	53	
106-93-4	1,2-Dibromoethane	52	
108-90-7	Chlorobenzene	50	
100-41-4	Ethylbenzene	55	
1330-20-7	Xylene (Total)	150	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LCS-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86559

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2402.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	49	
75-25-2	Bromoform	47	
98-82-8	Isopropylbenzene	51	
79-34-5	1,1,2,2-Tetrachloroethane	47	
541-73-1	1,3-Dichlorobenzene	54	
106-46-7	1,4-Dichlorobenzene	49	
95-50-1	1,2-Dichlorobenzene	53	
96-12-8	1,2-Dibromo-3-chloropropane	52	
120-82-1	1,2,4-Trichlorobenzene	52	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	62	
110-82-7	Cyclohexane	59	
79-20-9	Methyl acetate	48	
108-87-2	Methylcyclohexane	76	Q

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86559

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2403.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	61	
74-87-3	Chloromethane	47	
75-01-4	Vinyl chloride	51	
74-83-9	Bromomethane	46	
75-00-3	Chloroethane	50	
75-69-4	Trichlorofluoromethane	57	
75-35-4	1,1-Dichloroethene	49	
67-64-1	Acetone	37	Q
75-15-0	Carbon disulfide	54	
75-09-2	Methylene chloride	49	
156-60-5	trans-1,2-Dichloroethene	53	
1634-04-4	Methyl tert-butyl ether	55	
75-34-3	1,1-Dichloroethane	51	
78-93-3	2-Butanone	44	Q
156-59-2	cis-1,2-Dichloroethene	53	
67-66-3	Chloroform	49	
71-55-6	1,1,1-Trichloroethane	52	
56-23-5	Carbon tetrachloride	54	
107-06-2	1,2-Dichloroethane	48	
71-43-2	Benzene	51	
79-01-6	Trichloroethene	54	
78-87-5	1,2-Dichloropropane	52	
75-27-4	Bromodichloromethane	52	
10061-01-5	cis-1,3-Dichloropropene	51	
108-10-1	4-Methyl-2-pentanone	51	
108-88-3	Toluene	54	
10061-02-6	trans-1,3-Dichloropropene	51	
79-00-5	1,1,2-Trichloroethane	52	
127-18-4	Tetrachloroethene	51	
591-78-6	2-Hexanone	48	
124-48-1	Dibromochloromethane	53	
106-93-4	1,2-Dibromoethane	53	
108-90-7	Chlorobenzene	51	
100-41-4	Ethylbenzene	56	
1330-20-7	Xylene (Total)	150	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86559
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2403.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/23/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	50	
75-25-2	Bromoform	47	
98-82-8	Isopropylbenzene	51	
79-34-5	1,1,2,2-Tetrachloroethane	49	
541-73-1	1,3-Dichlorobenzene	54	
106-46-7	1,4-Dichlorobenzene	50	
95-50-1	1,2-Dichlorobenzene	53	
96-12-8	1,2-Dibromo-3-chloropropane	53	
120-82-1	1,2,4-Trichlorobenzene	53	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	62	
110-82-7	Cyclohexane	60	
79-20-9	Methyl acetate	48	
108-87-2	Methylcyclohexane	77	Q

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86559

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2405.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (Total)	1.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86559
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2405.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 03/23/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
110-82-7	Cyclohexane	1.0	U
79-20-9	Methyl acetate	1.0	U
108-87-2	Methylcyclohexane	1.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2407.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	46	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	150	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	2100	
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-01A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2407.D
 Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017
 % Moisture: not dec. Date Analyzed: 03/23/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-02A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2408.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	23	
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	130	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	96	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	2500	
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-02A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2408.D
 Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017
 % Moisture: not dec. Date Analyzed: 03/23/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2409.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	220	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	130	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	2500	
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-03A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2409.D
 Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017
 % Moisture: not dec. Date Analyzed: 03/23/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-7

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-04A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2412A.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 40.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	40	U
74-87-3	Chloromethane	40	U
75-01-4	Vinyl chloride	540	
74-83-9	Bromomethane	40	U
75-00-3	Chloroethane	40	U
75-69-4	Trichlorofluoromethane	40	U
75-35-4	1,1-Dichloroethene	40	U
67-64-1	Acetone	200	U
75-15-0	Carbon disulfide	40	U
75-09-2	Methylene chloride	40	U
156-60-5	trans-1,2-Dichloroethene	58	
1634-04-4	Methyl tert-butyl ether	40	U
75-34-3	1,1-Dichloroethane	40	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	7800	
67-66-3	Chloroform	40	U
71-55-6	1,1,1-Trichloroethane	40	U
56-23-5	Carbon tetrachloride	40	U
107-06-2	1,2-Dichloroethane	40	U
71-43-2	Benzene	40	U
79-01-6	Trichloroethene	1900	
78-87-5	1,2-Dichloropropane	40	U
75-27-4	Bromodichloromethane	40	U
10061-01-5	cis-1,3-Dichloropropene	40	U
108-10-1	4-Methyl-2-pentanone	200	U
108-88-3	Toluene	40	U
10061-02-6	trans-1,3-Dichloropropene	40	U
79-00-5	1,1,2-Trichloroethane	40	U
127-18-4	Tetrachloroethene	7900	
591-78-6	2-Hexanone	200	U
124-48-1	Dibromochloromethane	40	U
106-93-4	1,2-Dibromoethane	40	U
108-90-7	Chlorobenzene	40	U
100-41-4	Ethylbenzene	40	U
1330-20-7	Xylene (Total)	40	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-7

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-04A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2412A.D
 Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017
 % Moisture: not dec. Date Analyzed: 03/23/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 40.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	40	U
75-25-2	Bromoform	40	U
98-82-8	Isopropylbenzene	40	U
79-34-5	1,1,2,2-Tetrachloroethane	40	U
541-73-1	1,3-Dichlorobenzene	40	U
106-46-7	1,4-Dichlorobenzene	40	U
95-50-1	1,2-Dichlorobenzene	40	U
96-12-8	1,2-Dibromo-3-chloropropane	40	U
120-82-1	1,2,4-Trichlorobenzene	40	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	40	U
110-82-7	Cyclohexane	40	U
79-20-9	Methyl acetate	40	U
108-87-2	Methylcyclohexane	40	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2412B.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	62	
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
67-64-1	Acetone	25	U
75-15-0	Carbon disulfide	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
78-93-3	2-Butanone	25	U
156-59-2	cis-1,2-Dichloroethene	1200	E
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
56-23-5	Carbon tetrachloride	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U
71-43-2	Benzene	5.0	U
79-01-6	Trichloroethene	71	
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	25	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	380	
591-78-6	2-Hexanone	25	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
1330-20-7	Xylene (Total)	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2412B.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 5.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
79-20-9	Methyl acetate	5.0	U
108-87-2	Methylcyclohexane	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8DL

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-05ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2411.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	60	D
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	930	D
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	95	D
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	420	D
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8DL

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0206-05ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E2411.D

Level: (TRACE/LOW/MED) LOW Date Received: 03/22/2017

% Moisture: not dec. Date Analyzed: 03/23/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

2B - FORM II VOA-2
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-86559	98	97	97	99				0
02	LCSD-86559	97	96	98	100				0
03	MB-86559	105	105	97	93				0
04	PW-4	105	104	95	92				0
05	PW-5	106	102	95	91				0
06	PW-6	106	102	94	90				0
07	PW-8DL	108	104	98	91				0
08	PW-7	106	106	97	90				0
09	PW-8	106	103	95	90				0

QC LIMITS
(85-115)
(70-120)
(85-120)
(75-120)

VDMC1 (DBFM) Dibromofluoromethane
VDMC2 (DCE) = 1,2-Dichloroethane-d4
VDMC3 (TOL) = Toluene-d8
VDMC4 (BFB) = Bromofluorobenzene

Column to be used to flag recovery values
* Values outside of contract required QC limits

som15.09.23.1015

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: SDG No.: ST0206

Lab Sample ID: LCS-86559 LCS Lot No.:

Date Extracted: 03/23/2017 Date Analyzed (1): 03/23/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	61.3386	123		30 - 155
Chloromethane	50.0000	0.0000	46.7813	94		40 - 125
Vinyl chloride	50.0000	0.0000	51.3135	103		50 - 145
Bromomethane	50.0000	0.0000	45.8236	92		30 - 145
Chloroethane	50.0000	0.0000	50.4252	101		60 - 135
Trichlorofluoromethane	50.0000	0.0000	56.9187	114		60 - 145
1,1-Dichloroethene	50.0000	0.0000	48.5082	97		70 - 130
Acetone	50.0000	0.0000	33.3778	67		40 - 140
Carbon disulfide	50.0000	0.0000	54.2957	109		35 - 160
Methylene chloride	50.0000	0.0000	48.7219	97		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	51.0995	102		60 - 140
Methyl tert-butyl ether	50.0000	0.0000	54.9343	110		65 - 125
1,1-Dichloroethane	50.0000	0.0000	50.3392	101		70 - 135
2-Butanone	50.0000	0.0000	40.4400	81		30 - 150
cis-1,2-Dichloroethene	50.0000	0.0000	53.3835	107		70 - 125
Chloroform	50.0000	0.0000	48.4908	97		65 - 135
1,1,1-Trichloroethane	50.0000	0.0000	51.8525	104		65 - 130
Carbon tetrachloride	50.0000	0.0000	53.4795	107		65 - 140
1,2-Dichloroethane	50.0000	0.0000	47.9200	96		70 - 130
Benzene	50.0000	0.0000	50.3676	101		80 - 120
Trichloroethene	50.0000	0.0000	54.1100	108		70 - 125
1,2-Dichloropropane	50.0000	0.0000	50.9926	102		75 - 125
Bromodichloromethane	50.0000	0.0000	51.9244	104		75 - 120
cis-1,3-Dichloropropene	50.0000	0.0000	49.8432	100		70 - 130
4-Methyl-2-pentanone	50.0000	0.0000	49.9611	100		60 - 135
Toluene	50.0000	0.0000	53.2771	107		75 - 120
trans-1,3-Dichloropropene	50.0000	0.0000	50.9009	102		55 - 140
1,1,2-Trichloroethane	50.0000	0.0000	51.5118	103		75 - 125
Tetrachloroethene	50.0000	0.0000	49.5355	99		45 - 150
2-Hexanone	50.0000	0.0000	47.3766	95		55 - 130
Dibromochloromethane	50.0000	0.0000	52.8193	106		60 - 135
1,2-Dibromoethane	50.0000	0.0000	51.6750	103		80 - 120
Chlorobenzene	50.0000	0.0000	50.2294	100		80 - 120
Ethylbenzene	50.0000	0.0000	55.1129	110		75 - 125
Xylene (Total)	150.0000	0.0000	148.6748	99		81 - 121
Styrene	50.0000	0.0000	49.4985	99		65 - 135
Bromoform	50.0000	0.0000	47.0390	94		70 - 130
Isopropylbenzene	50.0000	0.0000	50.5805	101		75 - 125
1,1,2,2-Tetrachloroethane	50.0000	0.0000	47.0768	94		65 - 130
1,3-Dichlorobenzene	50.0000	0.0000	53.5363	107		75 - 125
1,4-Dichlorobenzene	50.0000	0.0000	49.2333	98		75 - 125
1,2-Dichlorobenzene	50.0000	0.0000	52.5589	105		70 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	52.1606	104		50 - 130
1,2,4-Trichlorobenzene	50.0000	0.0000	52.4873	105		65 - 135

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Lab Sample ID: LCS-86559 LCS Lot No.: _____
Date Extracted: 03/23/2017 Date Analyzed (1): 03/23/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
1,1,2-Trichloro-1,2,2-trif	50.0000	0.0000	61.8310	124		70 - 130
Cyclohexane	50.0000	0.0000	58.6663	117		70 - 130
Methyl acetate	50.0000	0.0000	47.5866	95		70 - 130
Methylcyclohexane	50.0000	0.0000	75.8957	152	*	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 1 out of 48 outside limits

COMMENTS: _____

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0206

Mod. Ref No.:

SDG No.: ST0206

Lab Sample ID: LCSD-86559

LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #		%RPD #	QC LIMITS	
						RPD	REC.
Dichlorodifluoromethane	50.0000	61.3390	123		0	30	30 - 155
Chloromethane	50.0000	47.3698	95		1	30	40 - 125
Vinyl chloride	50.0000	51.3729	103		0	30	50 - 145
Bromomethane	50.0000	46.0057	92		0	30	30 - 145
Chloroethane	50.0000	50.0899	100		1	30	60 - 135
Trichlorofluoromethane	50.0000	56.7342	113		1	30	60 - 145
1,1-Dichloroethene	50.0000	49.4645	99		2	30	70 - 130
Acetone	50.0000	37.4499	75		11	30	40 - 140
Carbon disulfide	50.0000	54.4784	109		0	30	35 - 160
Methylene chloride	50.0000	48.7308	97		0	30	55 - 140
trans-1,2-Dichloroethene	50.0000	52.7542	106		4	30	60 - 140
Methyl tert-butyl ether	50.0000	55.2175	110		0	30	65 - 125
1,1-Dichloroethane	50.0000	51.2395	102		1	30	70 - 135
2-Butanone	50.0000	43.7935	88		8	30	30 - 150
cis-1,2-Dichloroethene	50.0000	53.0165	106		1	30	70 - 125
Chloroform	50.0000	48.6113	97		0	30	65 - 135
1,1,1-Trichloroethane	50.0000	52.1702	104		0	30	65 - 130
Carbon tetrachloride	50.0000	54.3091	109		2	30	65 - 140
1,2-Dichloroethane	50.0000	47.8309	96		0	30	70 - 130
Benzene	50.0000	51.2586	103		2	30	80 - 120
Trichloroethene	50.0000	54.4906	109		1	30	70 - 125
1,2-Dichloropropane	50.0000	51.6758	103		1	30	75 - 125
Bromodichloromethane	50.0000	51.5879	103		1	30	75 - 120
cis-1,3-Dichloropropene	50.0000	51.1031	102		2	30	70 - 130
4-Methyl-2-pentanone	50.0000	51.0059	102		2	30	60 - 135
Toluene	50.0000	53.6283	107		0	30	75 - 120
trans-1,3-Dichloropropene	50.0000	50.7212	101		1	30	55 - 140
1,1,2-Trichloroethane	50.0000	51.6157	103		0	30	75 - 125
Tetrachloroethene	50.0000	50.9904	102		3	30	45 - 150
2-Hexanone	50.0000	48.1935	96		1	30	55 - 130
Dibromochloromethane	50.0000	52.9221	106		0	30	60 - 135
1,2-Dibromoethane	50.0000	52.6222	105		2	30	80 - 120
Chlorobenzene	50.0000	50.8473	102		2	30	80 - 120
Ethylbenzene	50.0000	55.6915	111		1	30	75 - 125
Xylene (Total)	150.0000	150.0715	100		1	30	81 - 121
Styrene	50.0000	49.6295	99		0	30	65 - 135
Bromoform	50.0000	47.4389	95		1	30	70 - 130
Isopropylbenzene	50.0000	50.9520	102		1	30	75 - 125
1,1,2,2-Tetrachloroethane	50.0000	48.6272	97		3	30	65 - 130
1,3-Dichlorobenzene	50.0000	54.2810	109		2	30	75 - 125
1,4-Dichlorobenzene	50.0000	49.6782	99		1	30	75 - 125
1,2-Dichlorobenzene	50.0000	53.3123	107		2	30	70 - 120
1,2-Dibromo-3-chloropropan	50.0000	53.4063	107		3	30	50 - 130
1,2,4-Trichlorobenzene	50.0000	52.6390	105		0	30	65 - 135
1,1,2-Trichloro-1,2,2-trif	50.0000	61.7304	123		1	30	70 - 130
Cyclohexane	50.0000	59.8420	120		3	30	70 - 130

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Lab Sample ID: LCSD-86559 LCS Lot No.: _____

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS	
							RPD	REC.
Methyl acetate	50.0000	48.4175	97		2		30	70 - 130
Methylcyclohexane	50.0000	77.2842	155	*	2		30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 48 outside limits

Spike Recovery: 1 out of 48 outside limits

COMMENTS: _____

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-86559

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Lab File ID: V8E2405.D Lab Sample ID: MB-86559
Instrument ID: V10
Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 03/23/2017
Level: (TRACE or LOW/MED) LOW Time Analyzed: 11:12
GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-86559	LCS-86559	V8E2402.D	9:44
02	LCSD-86559	LCSD-86559	V8E2403.D	10:13
03	PW-4	T0206-01A	V8E2407.D	12:11
04	PW-5	T0206-02A	V8E2408.D	12:40
05	PW-6	T0206-03A	V8E2409.D	13:09
06	PW-8DL	T0206-05ADL	V8E2411.D	14:07
07	PW-7	T0206-04A	V8E2412A.D	15:06
08	PW-8	T0206-05A	V8E2412B.D	15:35

COMMENTS: _____

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB10Z

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Lab File ID: V8E2270.D BFB Injection Date: 03/16/2017
Instrument ID: V10 BFB Injection Time: 16:22
GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	21.2
75	30.0 - 60.0% of mass 95	52.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	Greater than 50.0% of mass 95	75.3
175	5.0 - 9.0% of mass 174	5.3 (7.0)1
176	95.0 - 101.0% of mass 174	71.6 (95.1)1
177	5.0 - 9.0% of mass 176	4.8 (6.7)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD00110Z	VSTD00110Z	V8E2272.D	03/16/2017	17:20
02	VSTD00510Z	VSTD00510Z	V8E2274.D	03/16/2017	18:19
03	VSTD02010Z	VSTD02010Z	V8E2275.D	03/16/2017	18:48
04	VSTD05010Z	VSTD05010Z	V8E2276.D	03/16/2017	19:18
05	VSTD10010Z	VSTD10010Z	V8E2277.D	03/16/2017	19:47
06	VSTD20010Z	VSTD20010Z	V8E2278.D	03/16/2017	20:16

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB10F

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Lab File ID: V8E2400.D BFB Injection Date: 03/23/2017
Instrument ID: V10 BFB Injection Time: 8:45
GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.1
75	30.0 - 60.0% of mass 95	49.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.6 (0.7)1
174	Greater than 50.0% of mass 95	75.3
175	5.0 - 9.0% of mass 174	5.2 (6.9)1
176	95.0 - 101.0% of mass 174	74.0 (98.2)1
177	5.0 - 9.0% of mass 176	4.7 (6.3)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD05010F	VSTD05010F	V8E2401.D	03/23/2017	9:15
02	LCS-86559	LCS-86559	V8E2402.D	03/23/2017	9:44
03	LCSD-86559	LCSD-86559	V8E2403.D	03/23/2017	10:13
04	MB-86559	MB-86559	V8E2405.D	03/23/2017	11:12
05	PW-4	T0206-01A	V8E2407.D	03/23/2017	12:11
06	PW-5	T0206-02A	V8E2408.D	03/23/2017	12:40
07	PW-6	T0206-03A	V8E2409.D	03/23/2017	13:09
08	PW-8DL	T0206-05ADL	V8E2411.D	03/23/2017	14:07
09	PW-7	T0206-04A	V8E2412A.D	03/23/2017	15:06
10	PW-8	T0206-05A	V8E2412B.D	03/23/2017	15:35

Lab Name: Eurofins Spectrum Analytical, Inc. VOLATILE ORGANICS INITIAL CALIBRATION DATA Contract:

Lab Code: ESAI-RI Case No.: T0206 SAS No.: SDG No.: ST0206

Instrument ID: V10 Calibration Date(s): 03/16/2017 03/16/2017

Heated Purge: (Y/N) N Calibration Times: 17:20 20:16

Purge Volume: 5 (mL)

GC Column: DB-624 ID: 0.25 (mm) Length: 30 (mm)

LAB FILE ID: RRF005 = V8E2274.D RRF020 = V8E2275.D RRF050 = V8E2276.D RRF100 = V8E2277.D RRF200 = V8E2278.D
RRF001 = V8E2272.D

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF200	RRF001					RRF	% RSD
Dichlorodifluoromethane	0.259	0.228	0.204	0.252	0.281	0.235					0.243	11.0
Chloromethane	0.443	0.415	0.393	0.412	0.429	0.469					0.427	6.3
Vinyl chloride	0.330	0.377	0.356	0.363	0.363	0.340					0.355	4.8
Bromomethane	0.297	0.290	0.263	0.265	0.248	0.326					0.282	10.1
Chloroethane	0.184	0.194	0.177	0.178	0.181	0.200					0.186	5.1
Trichlorofluoromethane	0.513	0.476	0.429	0.485	0.501	0.481					0.481	6.0
1,1-Dichloroethene	0.301	0.276	0.253	0.265	0.264	0.319					0.280	9.1
Acetone	0.038	0.036	0.035	0.034	0.033						0.035	4.8
Carbon disulfide	0.979	1.052	1.041	1.081	1.091	0.887					1.022	7.5
Methylene chloride	0.353	0.328	0.316	0.319	0.323	0.393					0.339	8.7
trans-1,2-Dichloroethene	0.285	0.291	0.286	0.281	0.284	0.297					0.287	2.1
Methyl tert-butyl ether	0.712	0.778	0.827	0.853	0.882	0.712					0.794	9.1
1,1-Dichloroethane	0.591	0.594	0.566	0.573	0.574	0.603					0.583	2.5
2-Butanone	0.032	0.044	0.048	0.048	0.047						0.044	15.5
cis-1,2-Dichloroethene	0.319	0.336	0.329	0.341	0.347	0.300					0.328	5.2
Chloroform	0.647	0.652	0.612	0.607	0.599	0.668					0.631	4.5
1,1,1-Trichloroethane	0.458	0.453	0.440	0.454	0.458	0.432					0.449	2.4
Carbon tetrachloride	0.391	0.391	0.380	0.405	0.416	0.362					0.391	4.9
1,2-Dichloroethane	0.548	0.555	0.532	0.511	0.475	0.581					0.534	6.9
Benzene	1.270	1.311	1.263	1.282	1.259	1.288					1.279	1.5
Trichloroethene	0.269	0.285	0.288	0.303	0.315	0.281					0.290	5.6
1,2-Dichloropropane	0.353	0.371	0.363	0.366	0.368	0.316					0.356	5.8
Bromodichloromethane	0.455	0.492	0.500	0.503	0.498	0.420					0.478	7.0
cis-1,3-Dichloropropene	0.315	0.448	0.503	0.542	0.566	0.018					0.399	51.9
4-Methyl-2-pentanone	0.229	0.299	0.382	0.388	0.387						0.337	21.1
Toluene	1.251	1.296	1.300	1.337	1.362	1.273					1.303	3.1
trans-1,3-Dichloropropene	0.330	0.438	0.494	0.524	0.538	0.234					0.426	28.3

Lab Name: Eurofins Spectrum Analytical, Inc. VOLATILE ORGANICS INITIAL CALIBRATION DATA
Contract:

Lab Code: ESAI-RI Case No.: T0206 SAS No.: SDG No.: ST0206
Instrument ID: V10 Calibration Date(s): 03/16/2017 03/16/2017
Heated Purge: (Y/N) N Calibration Times: 17:20 20:16
Purge Volume: 5 (mL)
GC Column: DB-624 ID: 0.25 (mm) Length: 30 (mm)

LAB FILE ID: RRF005 = V8E2274.D RRF020 = V8E2275.D RRF050 = V8E2276.D RRF100 = V8E2277.D RRF200 = V8E2278.D
RRF001 = V8E2272.D

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF200	RRF001				RRF	% RSD
1,1,2-Trichloroethane	0.318	0.336	0.330	0.329	0.326	0.317				0.326	2.3
Tetrachloroethene	0.325	0.313	0.311	0.325	0.342	0.379				0.332	7.6
2-Hexanone	0.169	0.274	0.363	0.375	0.378					0.312	29.0
Dibromochloromethane	0.425	0.473	0.499	0.512	0.519	0.357				0.464	13.5
1,2-Dibromoethane	0.434	0.470	0.485	0.482	0.481	0.393				0.458	8.1
Chlorobenzene	1.217	1.230	1.206	1.220	1.234	1.256				1.227	1.4
Ethylbenzene	0.510	0.600	0.602	0.624	0.637	0.428				0.567	14.4
Xylene (Total)	0.608	0.735	0.756	0.782	0.804	0.285				0.662	29.8
Styrene	1.040	1.291	1.338	1.367	1.385	0.660				1.180	24.1
Bromoform	0.227	0.275	0.314	0.324	0.340	0.163				0.274	24.8
Isopropylbenzene	1.364	1.770	1.832	1.903	1.933	0.961				1.627	23.7
1,1,2,2-Tetrachloroethane	1.476	1.434	1.406	1.347	1.282	1.637				1.430	8.5
1,3-Dichlorobenzene	1.569	1.663	1.684	1.687	1.671	1.398				1.612	7.0
1,4-Dichlorobenzene	1.878	1.819	1.785	1.785	1.726	2.057				1.842	6.3
1,2-Dichlorobenzene	1.562	1.621	1.689	1.707	1.691	1.425				1.616	6.7
1,2-Dibromo-3-chloropropane	0.220	0.216	0.250	0.245	0.238	0.169				0.223	13.4
1,2,4-Trichlorobenzene	0.712	0.763	0.948	1.013	1.033	0.581				0.842	21.8
1,1,2-Trichloro-1,2,2-trifluoro	0.311	0.265	0.237	0.288	0.312	0.279				0.282	10.1
Cyclohexane	0.393	0.411	0.393	0.481	0.528	0.293				0.416	19.5
Methyl acetate	0.345	0.355	0.357	0.342	0.332	0.442				0.362	11.1
Methylcyclohexane	0.263	0.298	0.296	0.392	0.449	0.200				0.316	28.4

6C - FORM VI VOA-3

Lab Name: Eurofins Spectrum Analytical, Inc.

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Contract:

Lab Code: ESAI-RI

Case No.: T0206

SAS No.:

SDG No.: ST0206

Instrument ID: V10

Calibration Date(s): 03/16/2017

03/16/2017

Heated Purge: (Y/N) N

Calibration Times: 17:20

20:16

Purge Volume: 5

(mL)

GC Column: DB-624

ID: 0.25

(mm)

Length: 30

(mm)

LAB FILE ID: RRF005 = V8E2274.D RRF020 = V8E2275.D RRF050 = V8E2276.D RRF100 = V8E2277.D RRF200 = V8E2278.D
RRF001 = V8E2272.D

COMPOUND	RRF005	RRF020	RRF050	RRF100	RRF200	RRF001	RRF		% RSD
Dibromofluoromethane	0.273	0.270	0.261	0.258	0.258	0.276		0.266	3.0
1,2-Dichloroethane-d4	0.063	0.063	0.062	0.058	0.055	0.062		0.060	5.3
Toluene-d8	1.391	1.381	1.359	1.332	1.326	1.359		1.358	1.9
Bromofluorobenzene	0.525	0.528	0.530	0.513	0.512	0.494		0.517	2.7

7A - FORM VII VOA-1
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Instrument ID: V10 Calibration Date: 03/23/2017 Time: 9:15

Lab File ID: V8E2401.D Init. Calib. Date(s): 03/16/2017 03/16/2017

EPA Sample No.(VSTD####) VSTD05010F Init. Calib. Time(s): 17:20 20:16

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 5.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
Dichlorodifluoromethane	0.243	0.271	0.100	11.4	20.0
Chloromethane	0.427	0.359	0.100	-16.0	20.0
Vinyl chloride	0.355	0.331	0.100	-6.8	20.0
Bromomethane	0.282	0.234	0.100	-17.1	20.0
Chloroethane	0.186	0.177	0.100	-4.8	20.0
Trichlorofluoromethane	0.481	0.517	0.100	7.6	20.0
1,1-Dichloroethene	0.280	0.251	0.100	-10.2	20.0
Acetone	0.035	0.022	0.100	-38.8	20.0
Carbon disulfide	1.022	1.026	0.100	0.4	20.0
Methylene chloride	0.339	0.311	0.100	-8.3	20.0
trans-1,2-Dichloroethene	0.287	0.282	0.100	-2.0	20.0
Methyl tert-butyl ether	0.794	0.834	0.100	5.0	20.0
1,1-Dichloroethane	0.583	0.550	0.200	-5.6	20.0
2-Butanone	0.044	0.033	0.100	-25.0	20.0
cis-1,2-Dichloroethene	0.328	0.328	0.100	-0.1	20.0
Chloroform	0.631	0.589	0.200	-6.7	20.0
1,1,1-Trichloroethane	0.449	0.435	0.100	-3.1	20.0
Carbon tetrachloride	0.391	0.394	0.100	0.8	20.0
1,2-Dichloroethane	0.534	0.498	0.100	-6.6	20.0
Benzene	1.279	1.226	0.500	-4.2	20.0
Trichloroethene	0.290	0.296	0.200	2.0	20.0
1,2-Dichloropropane	0.356	0.357	0.100	0.2	20.0
Bromodichloromethane	0.478	0.485	0.200	1.4	20.0
cis-1,3-Dichloropropene	0.399	0.513	0.200	28.6	20.0
4-Methyl-2-pentanone	0.337	0.354	0.100	4.9	20.0
Toluene	1.303	1.308	0.400	0.3	20.0
trans-1,3-Dichloropropene	0.426	0.508	0.100	19.2	20.0
1,1,2-Trichloroethane	0.326	0.327	0.100	0.2	20.0
Tetrachloroethene	0.332	0.310	0.200	-6.9	20.0
2-Hexanone	0.312	0.309	0.100	-0.8	20.0
Dibromochloromethane	0.464	0.483	0.100	4.0	20.0
1,2-Dibromoethane	0.458	0.462	0.100	1.0	20.0
Chlorobenzene	1.227	1.168	0.500	-4.8	20.0
Ethylbenzene	0.567	0.585	0.100	3.1	20.0
Xylene (Total)	0.662	0.739	0.100	11.8	20.0
Styrene	1.180	1.282	0.300	8.7	20.0
Bromoform	0.274	0.300	0.100	9.6	20.0
Isopropylbenzene	1.627	1.798	0.100	10.5	20.0
1,1,2,2-Tetrachloroethane	1.430	1.282	0.300	-10.4	20.0
1,3-Dichlorobenzene	1.612	1.623	0.600	0.7	20.0

7B - FORM VII VOA-2
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

Instrument ID: V10 Calibration Date: 03/23/2017 Time: 9:15

Lab File ID: V8E2401.D Init. Calib. Date(s): 03/16/2017 03/16/2017

EPA Sample No.(VSTD####) VSTD05010F Init. Calib. Time(s): 17:20 20:16

Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)

Purge Volume: 5.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
1,4-Dichlorobenzene	1.842	1.726	0.500	-6.3	20.0
1,2-Dichlorobenzene	1.616	1.616	0.400	0.0	20.0
1,2-Dibromo-3-chloropropane	0.223	0.219	0.050	-1.7	20.0
1,2,4-Trichlorobenzene	0.842	0.972	0.200	15.5	20.0
1,1,2-Trichloro-1,2,2-trifluoroethane	0.282	0.327	0.100	16.0	20.0
Cyclohexane	0.416	0.523	0.100	25.6	20.0
Methyl acetate	0.362	0.324	0.100	-10.7	20.0
Methylcyclohexane	0.316	0.445	0.100	40.6	20.0

7C - FORM VII VOA-3
VOLATILE CONTINUING CALIBRATION DATA

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206
Instrument ID: V10 Calibration Date: 03/23/2017 Time: 9:15
Lab File ID: V8E2401.D Init. Calib. Date(s): 03/16/2017 03/16/2017
EPA Sample No.(VSTD####) VSTD05010F Init. Calib. Time(s): 17:20 20:16
Heated Purge: (Y/N) N GC Column: DB-624 ID: 0.25 (mm) Length: 30 (m)
Purge Volume: 5.0 (mL)

COMPOUND	RRF	RRF050	MIN RRF	%D	MAX %D
Dibromofluoromethane	0.266	0.259	0.100	-2.6	20.0
1,2-Dichloroethane-d4	0.060	0.058	0.100	-4.1	20.0
Toluene-d8	1.358	1.333	0.100	-1.8	20.0
Bromofluorobenzene	0.517	0.523	0.100	1.2	20.0

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0206 Mod. Ref No.: _____ SDG No.: ST0206

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 03/16/2017 03/16/2017

EPA Sample No.(VSTD#####): VSTD05010F Date Analyzed: 03/23/2017

Lab File ID (Standard): V8E2401.D Time Analyzed: 9:15

Instrument ID: V10 Heated Purge: (Y/N) N

		IS1 (S1)		IS2 (S2)		IS3 (S3)	
		AREA	#	AREA	#	AREA	#
	12 HOUR STD	770761		566595		306638	
	UPPER LIMIT	1541522		1133190		613276	
	LOWER LIMIT	385381		283298		153319	
	EPA SAMPLE NO.						
01	LCS-86559	813032	5.539	599496	9.021	316761	12.181
02	LCSD-86559	788071	5.538	570676	9.024	302223	12.181
03	MB-86559	681912	5.538	495803	9.021	228710	12.184
04	PW-4	657150	5.538	483836	9.021	230672	12.184
05	PW-5	639313	5.538	471171	9.021	223551	12.184
06	PW-6	628599	5.538	466496	9.020	218480	12.184
07	PW-8DL	606111	5.538	442670	9.021	210707	12.184
08	PW-7	606651	5.538	447325	9.020	209249	12.184
09	PW-8	605396	5.538	452099	9.021	211943	12.184

IS1 () = Fluorobenzene

IS2 () = Chlorobenzene-d5

IS3 () = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

Last Page of Data Report

Laboratory Report

Ecology and Environment Engineering P.C.
368 Pleasant View Drive
Lancaster, NY 14086

Work Order: T0302
Project : Mr. C's Dry Cleaning
Project #: 1703074.0011.07

Attn: Michael Steffan

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
T0302-01	PW-4	Aqueous	01-May-17 13:30	02-May-17 08:56
T0302-02	PW-5	Aqueous	01-May-17 13:30	02-May-17 08:56
T0302-03	PW-6	Aqueous	01-May-17 14:00	02-May-17 08:56
T0302-04	PW-7	Aqueous	01-May-17 14:00	02-May-17 08:56
T0302-05	PW-8	Aqueous	01-May-17 14:30	02-May-17 08:56

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the samples(s) as received. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

All applicable NELAP or USEPA CLP requirements have been met.

Use of the NELAP logo does not insure that Eurofins Spectrum Analytical is currently accredited for the specific test method or analyte. Please refer to our Quality page of our web site at www.EurofinsUS.com for the current list of certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Connecticut	PH-0153
Massachusetts	M-RI907
New Hampshire	2060
New Jersey	RI001
New York	11522
Rhode Island	LAI00349
USDA	P330-16-00031
USEPA - ISM	EP-W-14-032
USEPA - SOM	EP-W-14-032
DoD ELAP	L2247



Certificate # L2247 Testing

Authorized by:

Dawn E Wojcik

Dawn Wojcik
Laboratory Director

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Identification and Analytical Requirements Summary

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0302

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
PW-4	T0302-01	SW8260_W				
PW-5	T0302-02	SW8260_W				
PW-6	T0302-03	SW8260_W				
PW-7	T0302-04	SW8260_W				
PW-8	T0302-05	SW8260_W				

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0302

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_W					
T0302-01A	AQ	5/1/2017	5/2/2017	NA	5/3/2017
T0302-02A	AQ	5/1/2017	5/2/2017	NA	5/3/2017
T0302-03A	AQ	5/1/2017	5/2/2017	NA	5/3/2017
T0302-03ADL	AQ	5/1/2017	5/2/2017	NA	5/4/2017
T0302-04A	AQ	5/1/2017	5/2/2017	NA	5/3/2017
T0302-05A	AQ	5/1/2017	5/2/2017	NA	5/3/2017

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0302

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_W					
T0302-01A	AQ	SW8260_W	NA	LOW	20
T0302-02A	AQ	SW8260_W	NA	LOW	20
T0302-03A	AQ	SW8260_W	NA	LOW	20
T0302-03ADL	AQ	SW8260_W	NA	LOW	25
T0302-04A	AQ	SW8260_W	NA	LOW	40
T0302-05A	AQ	SW8260_W	NA	LOW	10

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

WorkOrder: T0302

Client ID: ENE

Project: Mr. C's Dry Cleaning

WO Name: Mr. C's Dry Cleaning

Location: MR_C_COMPLIANCE, 1703074.0011.07

Comments: 1 ppb ICAL for VOA. Run Influent sample by 10 X dilution, low result in effluent expected. Upload EDD and report to www.lab.ene.com, have late pentaly, Special invoice paperwork required.

Case:

SDG:

PO: 4500000623-B

HC Due: 05/08/2017

Report Level: ASP-A

Fax Due: 05/04/2017

Special Program:

Fax Report: ☒

EDD: EQUIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
T0302-01A	PW-4	05/01/2017 13:30	05/02/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0302-02A	PW-5	05/01/2017 13:30	05/02/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0302-03A	PW-6	05/01/2017 14:00	05/02/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0302-04A	PW-7	05/01/2017 14:00	05/02/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0302-05A	PW-8	05/01/2017 14:30	05/02/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA

Sample Transmittal Documentation



eurofins

Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 2 of 2

Special Handling:

☒ TAT - Date Needed: 5/1

☐ 11 Almgren Drive
Agawam, MA 01001
(413) 789-9018

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 60 days unless otherwise instructed.

Report To: E & E, Inc
368 Pleasantview Dr
Launcester, NY 14086
Telephone #: (716) 684-8060
Project Mgr: Mike Steffen

Invoice To: E & E, Inc
Quote #: _____
P.O No.: _____

Project No: _____
Site Name: Mr Cs Olyam
Location: East Aurora State: NY
Sampler(s): R. Allen, D. Iyer

F=Field Filtered 1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9=Deionized Water 10=H₂PO₄ 11= _____ 12= _____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

103035 103035 X2= _____ X3= _____
G= Grab C=Composite

Lab ID:	Sample ID:	Date:	Time:	Type
01 03	PW-4	5/1/17	1:30 PM	G
02 04	PW-5		1:30 PM	G
03 05	PW-6		2:00 PM	G
04 06	PW-7		2:00 PM	G
05 07	PW-8		2:30 PM	G

List Preservative Code below:

2

Containers

QA/QC Reporting Level

☐ Level I
☐ Level II
☐ Level III
☐ Level IV

Other: CAT A

State-specific reporting standards:

Check if chlorinated

Analysis

Temp °C

Observed

Correction Factor

Corrected

IR ID #

Condition upon receipt:

Custody Seals:

Present

Intact

Broken

Ambient

Refrigerated

DI VOA Frozen

Soil Jar Frozen

Relinquished by:

Received by:

Date:

Time:

EDD format:

E-mail to:

Richard C. Allen Jr

Ke...

5/2/17

8:56

PDF

ms.steffen@ene.com

Received By: <u>AP</u>		Page 01 of 00							
Reviewed By: <u>AM</u>		Log-in Date 05/02/2017							
Work Order: T0302	Client Name: Ecology and Environment Engineering P.C.								
Project Name/Event: Mr. C's Dry Cleaning / 1703074.0011.07									
Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.		Preservation (pH)		Soil HeadSpace or Air Bubble > or equal to 1/4"					
		Lab Sample ID	HNO3		H2SO4	HCl	NaOH	H3PO4	VOA Matrix
		T0302-01							H
		T0302-02							H
		T0302-03							H
		T0302-04							H
1. Custody Seal(s) <u>Present / Absent</u> <u>Intact / Broken</u>									
2. Custody Seal Nos. <u>N/A</u>									
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists <u>Present / Absent</u>									
4. Airbill <u>AirBill / Sticker</u> <u>Present / Absent</u>									
5. Airbill No. <u>FedEx 7790 3322 5747</u>									
6. Sample Tags <u>Present / Absent</u> Sample Tag Numbers <u>Listed /</u> <u>Not Listed on Chain-of-Custody</u>									
7. Sample Condition <u>Intact / Broken /</u> <u>Leaking</u>									
8. Cooler Temperature Indicator Bottle <u>Present / Absent</u>									
9. Cooler Temperature <u>4.3 °C</u>									
10. Does information on TR/COCs and sample tags agree? <u>Yes / No</u>									
11. Date Received at Laboratory <u>05/02/2017</u>									
12. Time Received <u>08:56</u>									
Sample Transfer									
Fraction (1) TVOA/VOA		Fraction (2) SVOA/PEST/ARO							
Area #		Area #							
By		By							
On		On							
IR Temp Gun ID: MT-74									
Coolant Condition: ICE									
Preservative Name/Lot No:									
		VOA Matrix Key: US = Unpreserved Soil A = Air UA = Unpreserved Aqueous H = HCl M = MeOH E = Encore N = NaHSO4 F = Freeze							
		See Sample Condition Notification/Corrective Action Form Yes / <u>No</u>							

* Volatiles *

REPORT NARRATIVE

Eurofins Spectrum Analytical, Inc.

Client : Ecology and Environment Engineering P.C.

Project: Mr. C's Dry Cleaning

Laboratory Workorder / SDG #: T0302

SW846 8260C, VOC by GC-MS (Trace)

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V10
Instrument Type: GCMS-VOA

Description: HP7890A
Manufacturer: Agilent
Model: 7890A / 5975C
GC Column used: 30 m X 0.25 mm ID [1.40 um thickness] DB-624
capillary column.

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits with the following exceptions. Please note that the acceptance criteria allow one surrogate recovery outside of the QC limits per fraction.

PW-4 (T0302-01A), recovery is above criteria for Dibromofluoromethane at 118% with criteria of (85-115).

PW-5 (T0302-02A), recovery is above criteria for Dibromofluoromethane at 115% with criteria of (85-115).

PW-6 (T0302-03A), recovery is above criteria for Dibromofluoromethane at 121% with criteria of (85-115).

PW-8 (T0302-05A), recovery is above criteria for Dibromofluoromethane at 122% with criteria of (85-115).

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

PW-4 (T0302-01A) : Dilution Factor: 20
PW-5 (T0302-02A) : Dilution Factor: 20
PW-6 (T0302-03A) : Dilution Factor: 20
PW-6 (T0302-03ADL) : Dilution Factor: 25
PW-7 (T0302-04A) : Dilution Factor: 40
PW-8 (T0302-05A) : Dilution Factor: 10

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Eurofins Spectrum Analytical, Inc. RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed: _____

Date: _____ 5/9/17 _____

Data Flag/Qualifiers (Page 1 of 2):

- U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).
- J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
 - estimated concentration for Tentatively Identified Compound
- B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a “trace” concentration below the reporting limit and equal to or above the detection limit.
- D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis
- E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.
- P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.
- A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

- N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.
- * For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.
- L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

- DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution
- RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.
- RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.
- RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.
- MS Matrix Spike.
- MSD Matrix Spike Duplicate
- DUP Duplicate analysis
- SD Serial Dilution
- PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86841
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3087.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/03/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	45	
74-87-3	Chloromethane	48	
75-01-4	Vinyl chloride	50	
74-83-9	Bromomethane	65	
75-00-3	Chloroethane	55	
75-69-4	Trichlorofluoromethane	64	Q
75-35-4	1,1-Dichloroethene	57	
67-64-1	Acetone	48	
75-15-0	Carbon disulfide	50	
75-09-2	Methylene chloride	50	
156-60-5	trans-1,2-Dichloroethene	50	
1634-04-4	Methyl tert-butyl ether	41	Q
75-34-3	1,1-Dichloroethane	49	
78-93-3	2-Butanone	51	
156-59-2	cis-1,2-Dichloroethene	51	
67-66-3	Chloroform	52	
71-55-6	1,1,1-Trichloroethane	50	
56-23-5	Carbon tetrachloride	55	
107-06-2	1,2-Dichloroethane	54	
71-43-2	Benzene	50	
79-01-6	Trichloroethene	52	
78-87-5	1,2-Dichloropropane	50	
75-27-4	Bromodichloromethane	52	
10061-01-5	cis-1,3-Dichloropropene	50	
108-10-1	4-Methyl-2-pentanone	46	
108-88-3	Toluene	49	
10061-02-6	trans-1,3-Dichloropropene	50	
79-00-5	1,1,2-Trichloroethane	52	
127-18-4	Tetrachloroethene	54	
591-78-6	2-Hexanone	46	
124-48-1	Dibromochloromethane	54	
106-93-4	1,2-Dibromoethane	57	
108-90-7	Chlorobenzene	53	
100-41-4	Ethylbenzene	51	
1330-20-7	Xylene (Total)	150	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86841

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3087.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	53	
75-25-2	Bromoform	53	
98-82-8	Isopropylbenzene	51	
79-34-5	1,1,2,2-Tetrachloroethane	51	
541-73-1	1,3-Dichlorobenzene	51	
106-46-7	1,4-Dichlorobenzene	51	
95-50-1	1,2-Dichlorobenzene	52	
96-12-8	1,2-Dibromo-3-chloropropane	47	
120-82-1	1,2,4-Trichlorobenzene	51	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	62	Q
110-82-7	Cyclohexane	48	
79-20-9	Methyl acetate	40	Q
108-87-2	Methylcyclohexane	51	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86851

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3156.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 05/04/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	43	
74-87-3	Chloromethane	48	
75-01-4	Vinyl chloride	48	
74-83-9	Bromomethane	46	
75-00-3	Chloroethane	46	
75-69-4	Trichlorofluoromethane	43	
75-35-4	1,1-Dichloroethene	45	
67-64-1	Acetone	47	
75-15-0	Carbon disulfide	51	
75-09-2	Methylene chloride	48	
156-60-5	trans-1,2-Dichloroethene	48	
1634-04-4	Methyl tert-butyl ether	51	
75-34-3	1,1-Dichloroethane	49	
78-93-3	2-Butanone	54	
156-59-2	cis-1,2-Dichloroethene	49	
67-66-3	Chloroform	48	
71-55-6	1,1,1-Trichloroethane	49	
56-23-5	Carbon tetrachloride	50	
107-06-2	1,2-Dichloroethane	50	
71-43-2	Benzene	49	
79-01-6	Trichloroethene	50	
78-87-5	1,2-Dichloropropane	50	
75-27-4	Bromodichloromethane	53	
10061-01-5	cis-1,3-Dichloropropene	49	
108-10-1	4-Methyl-2-pentanone	49	
108-88-3	Toluene	48	
10061-02-6	trans-1,3-Dichloropropene	46	
79-00-5	1,1,2-Trichloroethane	50	
127-18-4	Tetrachloroethene	46	
591-78-6	2-Hexanone	56	
124-48-1	Dibromochloromethane	46	
106-93-4	1,2-Dibromoethane	52	
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	50	
1330-20-7	Xylene (Total)	150	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86851
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3156.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/04/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	51	
75-25-2	Bromoform	43	
98-82-8	Isopropylbenzene	51	
79-34-5	1,1,2,2-Tetrachloroethane	48	
541-73-1	1,3-Dichlorobenzene	49	
106-46-7	1,4-Dichlorobenzene	49	
95-50-1	1,2-Dichlorobenzene	49	
96-12-8	1,2-Dibromo-3-chloropropane	47	
120-82-1	1,2,4-Trichlorobenzene	49	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	41	
110-82-7	Cyclohexane	45	
79-20-9	Methyl acetate	49	
108-87-2	Methylcyclohexane	44	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86841

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3088.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	44	
74-87-3	Chloromethane	47	
75-01-4	Vinyl chloride	49	
74-83-9	Bromomethane	63	
75-00-3	Chloroethane	53	
75-69-4	Trichlorofluoromethane	61	Q
75-35-4	1,1-Dichloroethene	56	
67-64-1	Acetone	42	
75-15-0	Carbon disulfide	49	
75-09-2	Methylene chloride	48	
156-60-5	trans-1,2-Dichloroethene	49	
1634-04-4	Methyl tert-butyl ether	39	Q
75-34-3	1,1-Dichloroethane	48	
78-93-3	2-Butanone	49	
156-59-2	cis-1,2-Dichloroethene	49	
67-66-3	Chloroform	51	
71-55-6	1,1,1-Trichloroethane	49	
56-23-5	Carbon tetrachloride	53	
107-06-2	1,2-Dichloroethane	52	
71-43-2	Benzene	48	
79-01-6	Trichloroethene	51	
78-87-5	1,2-Dichloropropane	48	
75-27-4	Bromodichloromethane	51	
10061-01-5	cis-1,3-Dichloropropene	48	
108-10-1	4-Methyl-2-pentanone	43	
108-88-3	Toluene	46	
10061-02-6	trans-1,3-Dichloropropene	48	
79-00-5	1,1,2-Trichloroethane	50	
127-18-4	Tetrachloroethene	52	
591-78-6	2-Hexanone	44	
124-48-1	Dibromochloromethane	52	
106-93-4	1,2-Dibromoethane	54	
108-90-7	Chlorobenzene	50	
100-41-4	Ethylbenzene	50	
1330-20-7	Xylene (Total)	150	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86841
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3088.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/03/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
100-42-5	Styrene	51	
75-25-2	Bromoform	50	
98-82-8	Isopropylbenzene	50	
79-34-5	1,1,2,2-Tetrachloroethane	47	
541-73-1	1,3-Dichlorobenzene	49	
106-46-7	1,4-Dichlorobenzene	48	
95-50-1	1,2-Dichlorobenzene	49	
96-12-8	1,2-Dibromo-3-chloropropane	45	
120-82-1	1,2,4-Trichlorobenzene	49	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	60	Q
110-82-7	Cyclohexane	47	
79-20-9	Methyl acetate	36	Q
108-87-2	Methylcyclohexane	48	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86851

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3157.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/04/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	44	
74-87-3	Chloromethane	52	
75-01-4	Vinyl chloride	49	
74-83-9	Bromomethane	50	
75-00-3	Chloroethane	50	
75-69-4	Trichlorofluoromethane	44	
75-35-4	1,1-Dichloroethene	47	
67-64-1	Acetone	49	
75-15-0	Carbon disulfide	53	
75-09-2	Methylene chloride	51	
156-60-5	trans-1,2-Dichloroethene	51	
1634-04-4	Methyl tert-butyl ether	52	
75-34-3	1,1-Dichloroethane	54	
78-93-3	2-Butanone	53	
156-59-2	cis-1,2-Dichloroethene	53	
67-66-3	Chloroform	51	
71-55-6	1,1,1-Trichloroethane	50	
56-23-5	Carbon tetrachloride	51	
107-06-2	1,2-Dichloroethane	53	
71-43-2	Benzene	51	
79-01-6	Trichloroethene	51	
78-87-5	1,2-Dichloropropane	52	
75-27-4	Bromodichloromethane	55	
10061-01-5	cis-1,3-Dichloropropene	50	
108-10-1	4-Methyl-2-pentanone	49	
108-88-3	Toluene	50	
10061-02-6	trans-1,3-Dichloropropene	47	
79-00-5	1,1,2-Trichloroethane	51	
127-18-4	Tetrachloroethene	47	
591-78-6	2-Hexanone	56	
124-48-1	Dibromochloromethane	47	
106-93-4	1,2-Dibromoethane	54	
108-90-7	Chlorobenzene	50	
100-41-4	Ethylbenzene	52	
1330-20-7	Xylene (Total)	160	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86851
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3157.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/04/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	53	
75-25-2	Bromoform	44	
98-82-8	Isopropylbenzene	52	
79-34-5	1,1,2,2-Tetrachloroethane	48	
541-73-1	1,3-Dichlorobenzene	49	
106-46-7	1,4-Dichlorobenzene	49	
95-50-1	1,2-Dichlorobenzene	50	
96-12-8	1,2-Dibromo-3-chloropropane	49	
120-82-1	1,2,4-Trichlorobenzene	51	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	42	
110-82-7	Cyclohexane	46	
79-20-9	Methyl acetate	52	
108-87-2	Methylcyclohexane	44	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86841

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3090.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (Total)	1.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86841
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3090.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/03/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
110-82-7	Cyclohexane	1.0	U
79-20-9	Methyl acetate	1.0	U
108-87-2	Methylcyclohexane	1.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86851

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3159.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 05/04/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (Total)	1.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86851
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3159.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/04/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
79-20-9	Methyl acetate	5.0	U
108-87-2	Methylcyclohexane	5.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3097.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. _____ Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	420	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	210	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	2500	
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-01A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3097.D
 Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017
 % Moisture: not dec. Date Analyzed: 05/03/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-02A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3098.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	110	
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	500	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	140	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	3200	
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-02A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3098.D
 Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017
 % Moisture: not dec. Date Analyzed: 05/03/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3099.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	200	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	150	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	4300	E
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3099.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6DL

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-03ADL

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3163.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. _____ Date Analyzed: 05/04/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 25.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	25	U
74-87-3	Chloromethane	25	U
75-01-4	Vinyl chloride	25	U
74-83-9	Bromomethane	25	U
75-00-3	Chloroethane	25	U
75-69-4	Trichlorofluoromethane	25	U
75-35-4	1,1-Dichloroethene	25	U
67-64-1	Acetone	130	U
75-15-0	Carbon disulfide	25	U
75-09-2	Methylene chloride	25	U
156-60-5	trans-1,2-Dichloroethene	25	U
1634-04-4	Methyl tert-butyl ether	25	U
75-34-3	1,1-Dichloroethane	25	U
78-93-3	2-Butanone	130	U
156-59-2	cis-1,2-Dichloroethene	25	U
67-66-3	Chloroform	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon tetrachloride	25	U
107-06-2	1,2-Dichloroethane	25	U
71-43-2	Benzene	25	U
79-01-6	Trichloroethene	25	U
78-87-5	1,2-Dichloropropane	25	U
75-27-4	Bromodichloromethane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
108-10-1	4-Methyl-2-pentanone	130	U
108-88-3	Toluene	25	U
10061-02-6	trans-1,3-Dichloropropene	25	U
79-00-5	1,1,2-Trichloroethane	25	U
127-18-4	Tetrachloroethene	2900	D
591-78-6	2-Hexanone	130	U
124-48-1	Dibromochloromethane	25	U
106-93-4	1,2-Dibromoethane	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
1330-20-7	Xylene (Total)	25	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6DL

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-03ADL
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3163.D
 Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017
 % Moisture: not dec. Date Analyzed: 05/04/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 25.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	25	U
75-25-2	Bromoform	25	U
98-82-8	Isopropylbenzene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U
96-12-8	1,2-Dibromo-3-chloropropane	25	U
120-82-1	1,2,4-Trichlorobenzene	25	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	25	U
110-82-7	Cyclohexane	25	U
79-20-9	Methyl acetate	25	U
108-87-2	Methylcyclohexane	25	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-7

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-04A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3100.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. _____ Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 40.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	40	U
74-87-3	Chloromethane	40	U
75-01-4	Vinyl chloride	500	
74-83-9	Bromomethane	40	U
75-00-3	Chloroethane	40	U
75-69-4	Trichlorofluoromethane	40	U
75-35-4	1,1-Dichloroethene	40	U
67-64-1	Acetone	200	U
75-15-0	Carbon disulfide	40	U
75-09-2	Methylene chloride	40	U
156-60-5	trans-1,2-Dichloroethene	64	
1634-04-4	Methyl tert-butyl ether	40	U
75-34-3	1,1-Dichloroethane	40	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	7900	
67-66-3	Chloroform	40	U
71-55-6	1,1,1-Trichloroethane	40	U
56-23-5	Carbon tetrachloride	40	U
107-06-2	1,2-Dichloroethane	40	U
71-43-2	Benzene	40	U
79-01-6	Trichloroethene	1600	
78-87-5	1,2-Dichloropropane	40	U
75-27-4	Bromodichloromethane	40	U
10061-01-5	cis-1,3-Dichloropropene	40	U
108-10-1	4-Methyl-2-pentanone	200	U
108-88-3	Toluene	40	U
10061-02-6	trans-1,3-Dichloropropene	40	U
79-00-5	1,1,2-Trichloroethane	40	U
127-18-4	Tetrachloroethene	6600	
591-78-6	2-Hexanone	200	U
124-48-1	Dibromochloromethane	40	U
106-93-4	1,2-Dibromoethane	40	U
108-90-7	Chlorobenzene	40	U
100-41-4	Ethylbenzene	40	U
1330-20-7	Xylene (Total)	40	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-7

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-04A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3100.D
 Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017
 % Moisture: not dec. Date Analyzed: 05/03/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 40.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	40	U
75-25-2	Bromoform	40	U
98-82-8	Isopropylbenzene	40	U
79-34-5	1,1,2,2-Tetrachloroethane	40	U
541-73-1	1,3-Dichlorobenzene	40	U
106-46-7	1,4-Dichlorobenzene	40	U
95-50-1	1,2-Dichlorobenzene	40	U
96-12-8	1,2-Dibromo-3-chloropropane	40	U
120-82-1	1,2,4-Trichlorobenzene	40	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	40	U
110-82-7	Cyclohexane	40	U
79-20-9	Methyl acetate	40	U
108-87-2	Methylcyclohexane	40	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3101.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	96	
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	11	
75-09-2	Methylene chloride	10	U
156-60-5	trans-1,2-Dichloroethene	17	
1634-04-4	Methyl tert-butyl ether	10	U
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	50	U
156-59-2	cis-1,2-Dichloroethene	1200	
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
107-06-2	1,2-Dichloroethane	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	38	
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	220	
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	10	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0302-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V8E3101.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/02/2017

% Moisture: not dec. Date Analyzed: 05/03/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
110-82-7	Cyclohexane	10	U
79-20-9	Methyl acetate	10	U
108-87-2	Methylcyclohexane	10	U

2B - FORM II VOA-2
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-86841	104	101	98	97				0
02	LCSD-86841	104	100	96	99				0
03	MB-86841	114	110	97	94				0
04	PW-4	118 *	112	96	94				1
05	PW-5	115 *	108	96	94				1
06	PW-6	121 *	114	95	94				1
07	PW-7	110	104	96	92				0
08	PW-8	122 *	113	95	93				1
09	LCS-86851	99	101	100	101				0
10	LCSD-86851	104	102	100	102				0
11	MB-86851	113	110	97	95				0
12	PW-6DL	112	109	99	98				0

QC LIMITS
(85-115)
(70-120)
(85-120)
(75-120)

VDMC1 (DBFM) Dibromofluoromethane
VDMC2 (DCE) = 1,2-Dichloroethane-d4
VDMC3 (TOL) = Toluene-d8
VDMC4 (BFB) = Bromofluorobenzene

Column to be used to flag recovery values
* Values outside of contract required QC limits

som15.09.23.1015

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: SDG No.: ST0302

Lab Sample ID: LCS-86841 LCS Lot No.:

Date Extracted: 05/03/2017 Date Analyzed (1): 05/03/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	44.5765	89		30 - 155
Chloromethane	50.0000	0.0000	48.3720	97		40 - 125
Vinyl chloride	50.0000	0.0000	50.4198	101		50 - 145
Bromomethane	50.0000	0.0000	65.4596	131		30 - 145
Chloroethane	50.0000	0.0000	54.9187	110		60 - 135
Trichlorofluoromethane	50.0000	0.0000	63.7825	128		60 - 145
1,1-Dichloroethene	50.0000	0.0000	57.2754	115		70 - 130
Acetone	50.0000	0.0000	47.6415	95		40 - 140
Carbon disulfide	50.0000	0.0000	50.4755	101		35 - 160
Methylene chloride	50.0000	0.0000	49.6575	99		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	49.9993	100		60 - 140
Methyl tert-butyl ether	50.0000	0.0000	40.9683	82		65 - 125
1,1-Dichloroethane	50.0000	0.0000	48.5877	97		70 - 135
2-Butanone	50.0000	0.0000	50.8836	102		30 - 150
cis-1,2-Dichloroethene	50.0000	0.0000	50.8878	102		70 - 125
Chloroform	50.0000	0.0000	52.1725	104		65 - 135
1,1,1-Trichloroethane	50.0000	0.0000	50.2881	101		65 - 130
Carbon tetrachloride	50.0000	0.0000	55.3596	111		65 - 140
1,2-Dichloroethane	50.0000	0.0000	54.0458	108		70 - 130
Benzene	50.0000	0.0000	50.0393	100		80 - 120
Trichloroethene	50.0000	0.0000	52.4096	105		70 - 125
1,2-Dichloropropane	50.0000	0.0000	49.5014	99		75 - 125
Bromodichloromethane	50.0000	0.0000	52.3673	105		75 - 120
cis-1,3-Dichloropropene	50.0000	0.0000	49.8553	100		70 - 130
4-Methyl-2-pentanone	50.0000	0.0000	46.4807	93		60 - 135
Toluene	50.0000	0.0000	48.9480	98		75 - 120
trans-1,3-Dichloropropene	50.0000	0.0000	49.7508	100		55 - 140
1,1,2-Trichloroethane	50.0000	0.0000	51.9474	104		75 - 125
Tetrachloroethene	50.0000	0.0000	53.8635	108		45 - 150
2-Hexanone	50.0000	0.0000	45.7381	91		55 - 130
Dibromochloromethane	50.0000	0.0000	54.4988	109		60 - 135
1,2-Dibromoethane	50.0000	0.0000	56.5140	113		80 - 120
Chlorobenzene	50.0000	0.0000	52.5264	105		80 - 120
Ethylbenzene	50.0000	0.0000	51.1434	102		75 - 125
Xylene (Total)	150.0000	0.0000	154.7693	103		81 - 121
Styrene	50.0000	0.0000	52.5591	105		65 - 135
Bromoform	50.0000	0.0000	52.7919	106		70 - 130
Isopropylbenzene	50.0000	0.0000	50.9118	102		75 - 125
1,1,2,2-Tetrachloroethane	50.0000	0.0000	50.6324	101		65 - 130
1,3-Dichlorobenzene	50.0000	0.0000	51.4340	103		75 - 125
1,4-Dichlorobenzene	50.0000	0.0000	51.2147	102		75 - 125
1,2-Dichlorobenzene	50.0000	0.0000	51.6224	103		70 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	46.7993	94		50 - 130
1,2,4-Trichlorobenzene	50.0000	0.0000	50.7913	102		65 - 135

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Lab Sample ID: LCS-86841 LCS Lot No.: _____
Date Extracted: 05/03/2017 Date Analyzed (1): 05/03/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
1,1,2-Trichloro-1,2,2-trif	50.0000	0.0000	62.3768	125		70 - 130
Cyclohexane	50.0000	0.0000	48.4538	97		70 - 130
Methyl acetate	50.0000	0.0000	39.6752	79		70 - 130
Methylcyclohexane	50.0000	0.0000	50.7703	102		70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS: _____

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: SDG No.: ST0302

Lab Sample ID: LCS-86851 LCS Lot No.:

Date Extracted: 05/04/2017 Date Analyzed (1): 05/04/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	42.8500	86		30 - 155
Chloromethane	50.0000	0.0000	48.0729	96		40 - 125
Vinyl chloride	50.0000	0.0000	48.2867	97		50 - 145
Bromomethane	50.0000	0.0000	45.9792	92		30 - 145
Chloroethane	50.0000	0.0000	46.3356	93		60 - 135
Trichlorofluoromethane	50.0000	0.0000	42.5323	85		60 - 145
1,1-Dichloroethene	50.0000	0.0000	45.2634	91		70 - 130
Acetone	50.0000	0.0000	47.1698	94		40 - 140
Carbon disulfide	50.0000	0.0000	50.8092	102		35 - 160
Methylene chloride	50.0000	0.0000	47.7909	96		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	48.2782	97		60 - 140
Methyl tert-butyl ether	50.0000	0.0000	50.6627	101		65 - 125
1,1-Dichloroethane	50.0000	0.0000	49.3231	99		70 - 135
2-Butanone	50.0000	0.0000	54.4143	109		30 - 150
cis-1,2-Dichloroethene	50.0000	0.0000	49.3804	99		70 - 125
Chloroform	50.0000	0.0000	48.2735	97		65 - 135
1,1,1-Trichloroethane	50.0000	0.0000	48.9134	98		65 - 130
Carbon tetrachloride	50.0000	0.0000	50.3101	101		65 - 140
1,2-Dichloroethane	50.0000	0.0000	49.5210	99		70 - 130
Benzene	50.0000	0.0000	49.3306	99		80 - 120
Trichloroethene	50.0000	0.0000	49.5238	99		70 - 125
1,2-Dichloropropane	50.0000	0.0000	49.8011	100		75 - 125
Bromodichloromethane	50.0000	0.0000	52.5356	105		75 - 120
cis-1,3-Dichloropropene	50.0000	0.0000	48.5876	97		70 - 130
4-Methyl-2-pentanone	50.0000	0.0000	48.6421	97		60 - 135
Toluene	50.0000	0.0000	48.0805	96		75 - 120
trans-1,3-Dichloropropene	50.0000	0.0000	45.8132	92		55 - 140
1,1,2-Trichloroethane	50.0000	0.0000	49.5787	99		75 - 125
Tetrachloroethene	50.0000	0.0000	46.0264	92		45 - 150
2-Hexanone	50.0000	0.0000	56.1145	112		55 - 130
Dibromochloromethane	50.0000	0.0000	45.7685	92		60 - 135
1,2-Dibromoethane	50.0000	0.0000	52.1819	104		80 - 120
Chlorobenzene	50.0000	0.0000	49.0322	98		80 - 120
Ethylbenzene	50.0000	0.0000	50.3654	101		75 - 125
Xylene (Total)	150.0000	0.0000	151.7549	101		81 - 121
Styrene	50.0000	0.0000	50.7877	102		65 - 135
Bromoform	50.0000	0.0000	42.7278	85		70 - 130
Isopropylbenzene	50.0000	0.0000	50.8131	102		75 - 125
1,1,2,2-Tetrachloroethane	50.0000	0.0000	48.3922	97		65 - 130
1,3-Dichlorobenzene	50.0000	0.0000	48.6706	97		75 - 125
1,4-Dichlorobenzene	50.0000	0.0000	48.8601	98		75 - 125
1,2-Dichlorobenzene	50.0000	0.0000	49.4878	99		70 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	47.0698	94		50 - 130
1,2,4-Trichlorobenzene	50.0000	0.0000	48.6146	97		65 - 135

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Lab Sample ID: LCS-86851 LCS Lot No.: _____
Date Extracted: 05/04/2017 Date Analyzed (1): 05/04/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
1,1,2-Trichloro-1,2,2-trif	50.0000	0.0000	41.2806	83		70 - 130
Cyclohexane	50.0000	0.0000	45.0696	90		70 - 130
Methyl acetate	50.0000	0.0000	48.7071	97		70 - 130
Methylcyclohexane	50.0000	0.0000	43.8637	88		70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS: _____

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0302

Mod. Ref No.:

SDG No.: ST0302

Lab Sample ID: LCSD-86841

LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #		%RPD #		QC LIMITS	
							RPD	REC.
Dichlorodifluoromethane	50.0000	43.5021	87		2		30	30 - 155
Chloromethane	50.0000	46.5941	93		4		30	40 - 125
Vinyl chloride	50.0000	49.0592	98		3		30	50 - 145
Bromomethane	50.0000	63.0542	126		4		30	30 - 145
Chloroethane	50.0000	53.1973	106		4		30	60 - 135
Trichlorofluoromethane	50.0000	61.2376	122		5		30	60 - 145
1,1-Dichloroethene	50.0000	55.5731	111		4		30	70 - 130
Acetone	50.0000	41.8480	84		12		30	40 - 140
Carbon disulfide	50.0000	49.0703	98		3		30	35 - 160
Methylene chloride	50.0000	47.8034	96		3		30	55 - 140
trans-1,2-Dichloroethene	50.0000	48.9186	98		2		30	60 - 140
Methyl tert-butyl ether	50.0000	39.1967	78		5		30	65 - 125
1,1-Dichloroethane	50.0000	47.6458	95		2		30	70 - 135
2-Butanone	50.0000	48.9093	98		4		30	30 - 150
cis-1,2-Dichloroethene	50.0000	49.0111	98		4		30	70 - 125
Chloroform	50.0000	50.7557	102		2		30	65 - 135
1,1,1-Trichloroethane	50.0000	48.6599	97		4		30	65 - 130
Carbon tetrachloride	50.0000	53.0474	106		5		30	65 - 140
1,2-Dichloroethane	50.0000	51.7236	103		5		30	70 - 130
Benzene	50.0000	48.2506	97		3		30	80 - 120
Trichloroethene	50.0000	51.1189	102		3		30	70 - 125
1,2-Dichloropropane	50.0000	48.2814	97		2		30	75 - 125
Bromodichloromethane	50.0000	50.5889	101		4		30	75 - 120
cis-1,3-Dichloropropene	50.0000	47.8154	96		4		30	70 - 130
4-Methyl-2-pentanone	50.0000	42.8044	86		8		30	60 - 135
Toluene	50.0000	46.4649	93		5		30	75 - 120
trans-1,3-Dichloropropene	50.0000	47.6196	95		5		30	55 - 140
1,1,2-Trichloroethane	50.0000	49.9263	100		4		30	75 - 125
Tetrachloroethene	50.0000	51.8581	104		4		30	45 - 150
2-Hexanone	50.0000	44.1789	88		3		30	55 - 130
Dibromochloromethane	50.0000	52.0967	104		5		30	60 - 135
1,2-Dibromoethane	50.0000	53.8350	108		5		30	80 - 120
Chlorobenzene	50.0000	50.4336	101		4		30	80 - 120
Ethylbenzene	50.0000	49.5555	99		3		30	75 - 125
Xylene (Total)	150.0000	149.5395	100		3		30	81 - 121
Styrene	50.0000	50.6891	101		4		30	65 - 135
Bromoform	50.0000	49.6894	99		7		30	70 - 130
Isopropylbenzene	50.0000	49.6126	99		3		30	75 - 125
1,1,2,2-Tetrachloroethane	50.0000	46.5274	93		8		30	65 - 130
1,3-Dichlorobenzene	50.0000	49.1705	98		5		30	75 - 125
1,4-Dichlorobenzene	50.0000	48.0918	96		6		30	75 - 125
1,2-Dichlorobenzene	50.0000	49.4635	99		4		30	70 - 120
1,2-Dibromo-3-chloropropan	50.0000	44.6791	89		5		30	50 - 130
1,2,4-Trichlorobenzene	50.0000	48.9501	98		4		30	65 - 135
1,1,2-Trichloro-1,2,2-trif	50.0000	59.9808	120		4		30	70 - 130
Cyclohexane	50.0000	46.5789	93		4		30	70 - 130

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: SDG No.: ST0302

Lab Sample ID: LCSD-86841 LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #		%RPD #		QC LIMITS	
							RPD	REC.
Methyl acetate	50.0000	36.0926	72		9		30	70 - 130
Methylcyclohexane	50.0000	48.4987	97		5		30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 48 outside limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS:

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0302

Mod. Ref No.:

SDG No.: ST0302

Lab Sample ID: LCSD-86851

LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #		%RPD #		QC LIMITS	
							RPD	REC.
Dichlorodifluoromethane	50.0000	43.8086	88		2		30	30 - 155
Chloromethane	50.0000	51.7941	104		8		30	40 - 125
Vinyl chloride	50.0000	49.4101	99		2		30	50 - 145
Bromomethane	50.0000	49.7223	99		7		30	30 - 145
Chloroethane	50.0000	49.6818	99		6		30	60 - 135
Trichlorofluoromethane	50.0000	43.9189	88		3		30	60 - 145
1,1-Dichloroethene	50.0000	47.4048	95		4		30	70 - 130
Acetone	50.0000	49.3006	99		5		30	40 - 140
Carbon disulfide	50.0000	52.9155	106		4		30	35 - 160
Methylene chloride	50.0000	50.8983	102		6		30	55 - 140
trans-1,2-Dichloroethene	50.0000	50.8828	102		5		30	60 - 140
Methyl tert-butyl ether	50.0000	51.8370	104		3		30	65 - 125
1,1-Dichloroethane	50.0000	53.5729	107		8		30	70 - 135
2-Butanone	50.0000	53.4419	107		2		30	30 - 150
cis-1,2-Dichloroethene	50.0000	52.5712	105		6		30	70 - 125
Chloroform	50.0000	50.8650	102		5		30	65 - 135
1,1,1-Trichloroethane	50.0000	50.3751	101		3		30	65 - 130
Carbon tetrachloride	50.0000	51.2517	103		2		30	65 - 140
1,2-Dichloroethane	50.0000	52.9470	106		7		30	70 - 130
Benzene	50.0000	50.9158	102		3		30	80 - 120
Trichloroethene	50.0000	50.5366	101		2		30	70 - 125
1,2-Dichloropropane	50.0000	51.6036	103		3		30	75 - 125
Bromodichloromethane	50.0000	55.0642	110		5		30	75 - 120
cis-1,3-Dichloropropene	50.0000	50.0382	100		3		30	70 - 130
4-Methyl-2-pentanone	50.0000	48.7591	98		1		30	60 - 135
Toluene	50.0000	49.8346	100		4		30	75 - 120
trans-1,3-Dichloropropene	50.0000	47.3697	95		3		30	55 - 140
1,1,2-Trichloroethane	50.0000	51.0654	102		3		30	75 - 125
Tetrachloroethene	50.0000	46.6138	93		1		30	45 - 150
2-Hexanone	50.0000	56.0878	112		0		30	55 - 130
Dibromochloromethane	50.0000	47.0885	94		2		30	60 - 135
1,2-Dibromoethane	50.0000	53.6364	107		3		30	80 - 120
Chlorobenzene	50.0000	50.0503	100		2		30	80 - 120
Ethylbenzene	50.0000	51.8888	104		3		30	75 - 125
Xylene (Total)	150.0000	157.1668	105		4		30	81 - 121
Styrene	50.0000	52.7392	105		3		30	65 - 135
Bromoform	50.0000	43.9813	88		3		30	70 - 130
Isopropylbenzene	50.0000	51.6937	103		1		30	75 - 125
1,1,2,2-Tetrachloroethane	50.0000	48.4192	97		0		30	65 - 130
1,3-Dichlorobenzene	50.0000	49.0103	98		1		30	75 - 125
1,4-Dichlorobenzene	50.0000	49.1177	98		0		30	75 - 125
1,2-Dichlorobenzene	50.0000	50.1100	100		1		30	70 - 120
1,2-Dibromo-3-chloropropan	50.0000	49.0254	98		4		30	50 - 130
1,2,4-Trichlorobenzene	50.0000	50.7194	101		4		30	65 - 135
1,1,2-Trichloro-1,2,2-trif	50.0000	42.0986	84		1		30	70 - 130
Cyclohexane	50.0000	45.7775	92		2		30	70 - 130

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: SDG No.: ST0302

Lab Sample ID: LCSD-86851 LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS	
							RPD	REC.
Methyl acetate	50.0000	51.7241	103		6		30	70 - 130
Methylcyclohexane	50.0000	44.1286	88		0		30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 48 outside limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS:

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-86841

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Lab File ID: V8E3090.D Lab Sample ID: MB-86841
Instrument ID: V10
Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 05/03/2017
Level: (TRACE or LOW/MED) LOW Time Analyzed: 12:32
GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-86841	LCS-86841	V8E3087.D	11:04
02	LCSD-86841	LCSD-86841	V8E3088.D	11:34
03	PW-4	T0302-01A	V8E3097.D	15:57
04	PW-5	T0302-02A	V8E3098.D	16:26
05	PW-6	T0302-03A	V8E3099.D	16:55
06	PW-7	T0302-04A	V8E3100.D	17:24
07	PW-8	T0302-05A	V8E3101.D	17:53

COMMENTS: _____

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-86851

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
Lab File ID: V8E3159.D Lab Sample ID: MB-86851
Instrument ID: V10
Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 05/04/2017
Level: (TRACE or LOW/MED) LOW Time Analyzed: 21:21
GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-86851	LCS-86851	V8E3156.D	19:53
02	LCSD-86851	LCSD-86851	V8E3157.D	20:22
03	PW-6DL	T0302-03ADL	V8E3163.D	23:17

COMMENTS: _____

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB10J

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Lab File ID: V8E2833.D BFB Injection Date: 04/20/2017

Instrument ID: V10 BFB Injection Time: 9:18

GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 60.0% of mass 95	48.4
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.7
173	Less than 2.0% of mass 174	0.3 (0.4)1
174	Greater than 50.0% of mass 95	78.5
175	5.0 - 9.0% of mass 174	5.5 (7.0)1
176	95.0 - 101.0% of mass 174	76.3 (97.3)1
177	5.0 - 9.0% of mass 176	5.2 (6.8)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD00110J	VSTD00110J	V8E2835.D	04/20/2017	10:17
02	VSTD00510J	VSTD00510J	V8E2837.D	04/20/2017	11:16
03	VSTD02010J	VSTD02010J	V8E2838.D	04/20/2017	11:45
04	VSTD05010J	VSTD05010J	V8E2839.D	04/20/2017	12:14
05	VSTD10010J	VSTD10010J	V8E2840.D	04/20/2017	12:44
06	VSTD20010J	VSTD20010J	V8E2841.D	04/20/2017	13:13

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB10V

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Lab File ID: V8E3085.D BFB Injection Date: 05/03/2017

Instrument ID: V10 BFB Injection Time: 10:05

GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.7
75	30.0 - 60.0% of mass 95	50.8
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.9
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	Greater than 50.0% of mass 95	80.3
175	5.0 - 9.0% of mass 174	5.6 (6.9)1
176	95.0 - 101.0% of mass 174	78.7 (98.1)1
177	5.0 - 9.0% of mass 176	5.1 (6.4)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD05010V	VSTD05010V	V8E3086.D	05/03/2017	10:35
02	LCS-86841	LCS-86841	V8E3087.D	05/03/2017	11:04
03	LCSD-86841	LCSD-86841	V8E3088.D	05/03/2017	11:34
04	MB-86841	MB-86841	V8E3090.D	05/03/2017	12:32
05	PW-4	T0302-01A	V8E3097.D	05/03/2017	15:57
06	PW-5	T0302-02A	V8E3098.D	05/03/2017	16:26
07	PW-6	T0302-03A	V8E3099.D	05/03/2017	16:55
08	PW-7	T0302-04A	V8E3100.D	05/03/2017	17:24
09	PW-8	T0302-05A	V8E3101.D	05/03/2017	17:53

5A - FORM V VOA
VOLATILE ORGANIC INSTRUMENT
PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

EPA SAMPLE NO.

BFB10X

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

Lab File ID: V8E3146.D BFB Injection Date: 05/04/2017

Instrument ID: V10 BFB Injection Time: 15:01

GC Column: DB-624 ID: 0.25 (mm)

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.1
75	30.0 - 60.0% of mass 95	50.0
95	Base peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.0
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	Greater than 50.0% of mass 95	82.2
175	5.0 - 9.0% of mass 174	5.9 (7.2)1
176	95.0 - 101.0% of mass 174	80.7 (98.2)1
177	5.0 - 9.0% of mass 176	5.4 (6.7)2

1 - Value is % mass 174

2 - Value is % mass 176

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD00110X	VSTD00110X	V8E3148.D	05/04/2017	16:00
02	VSTD00510X	VSTD00510X	V8E3150.D	05/04/2017	16:58
03	VSTD02010X	VSTD02010X	V8E3151.D	05/04/2017	17:27
04	VSTD05010X	VSTD05010X	V8E3152.D	05/04/2017	17:56
05	VSTD10010X	VSTD10010X	V8E3153.D	05/04/2017	18:26
06	VSTD20010X	VSTD20010X	V8E3154.D	05/04/2017	18:55
07	LCS-86851	LCS-86851	V8E3156.D	05/04/2017	19:53
08	LCSD-86851	LCSD-86851	V8E3157.D	05/04/2017	20:22
09	MB-86851	MB-86851	V8E3159.D	05/04/2017	21:21
10	PW-6DL	T0302-03ADL	V8E3163.D	05/04/2017	23:17

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302
 GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 04/20/2017 04/20/2017
 EPA Sample No.(VSTD#####): VSTD05010V Date Analyzed: 05/03/2017
 Lab File ID (Standard): V8E3086.D Time Analyzed: 10:35
 Instrument ID: V10 Heated Purge: (Y/N) N

	IS1 (S1)		IS2 (S2)		IS3 (S3)	
	AREA	#	RT	#	AREA	#
12 HOUR STD	391608		5.535		165037	12.184
UPPER LIMIT	783216		6.035		330074	12.684
LOWER LIMIT	195804		5.035		82519	11.684
EPA SAMPLE NO.						
01 LCS-86841	391331		5.538		163280	12.184
02 LCSD-86841	385162		5.538		163823	12.181
03 MB-86841	341438		5.538		146145	12.184
04 PW-4	324686		5.538		145801	12.184
05 PW-5	325598		5.539		143125	12.185
06 PW-6	311465		5.538		142431	12.184
07 PW-7	339877		5.538		142682	12.188
08 PW-8	312363		5.538		142959	12.184

IS1 () = Fluorobenzene

IS2 () = Chlorobenzene-d5

IS3 () = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0302 Mod. Ref No.: _____ SDG No.: ST0302

GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 05/04/2017 05/04/2017

EPA Sample No.(VSTD#####): VSTD05010X Date Analyzed: 05/04/2017

Lab File ID (Standard): V8E3152.D Time Analyzed: 17:56

Instrument ID: V10 Heated Purge: (Y/N) N

		IS1 (S1)		IS2 (S2)		IS3 (S3)	
		AREA	#	AREA	#	AREA	#
	12 HOUR STD	338223	5.538	253482	9.021	145201	12.181
	UPPER LIMIT	676446	6.038	506964	9.521	290402	12.681
	LOWER LIMIT	169112	5.038	126741	8.521	72601	11.681
	EPA SAMPLE NO.						
01	LCS-86851	359745	5.538	270662	9.020	151706	12.184
02	LCSD-86851	348676	5.538	264451	9.020	151449	12.184
03	MB-86851	294689	5.535	257260	9.021	136610	12.184
04	PW-6DL	274412	5.535	234221	9.020	126537	12.184

IS1 () = Fluorobenzene

IS2 () = Chlorobenzene-d5

IS3 () = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

Last Page of Data Report

Laboratory Report

Ecology and Environment Engineering P.C.
 368 Pleasant View Drive
 Lancaster, NY 14086

Work Order: T0346
 Project : Mr. C's Dry Cleaning
 Project #: 1703074.0011.07

Attn: Michael Steffan

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
T0346-01	PW-4	Aqueous	17-May-17 00:00	18-May-17 09:30
T0346-02	PW-5	Aqueous	17-May-17 00:00	18-May-17 09:30
T0346-03	PW-6	Aqueous	17-May-17 00:00	18-May-17 09:30
T0346-04	PW-7	Aqueous	17-May-17 00:00	18-May-17 09:30
T0346-05	PW-8	Aqueous	17-May-17 00:00	18-May-17 09:30

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the sample(s) as received. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

All applicable NELAP or USEPA CLP requirements have been met.

Use of the NELAP logo does not insure that Eurofins Spectrum Analytical is currently accredited for the specific test method or analyte. Please refer to our Quality page of our web site at www.EurofinsUS.com for the current list of certifications and fields of accreditation.

Please contact the Laboratory or Technical Director at 401-732-3400 with any questions regarding the data contained in the laboratory report.

Certification List:

Connecticut	PH-0153
Massachusetts	M-RI907
New Hampshire	2060
New Jersey	RI001
New York	11522
Rhode Island	LAI00349
USDA	P330-16-00031
USEPA - ISM	EP-W-14-032
USEPA - SOM	EP-W-14-032
DoD ELAP	L2247



Certificate # L2247 Testing

Authorized by:

Dawn E Wojcik

Dawn Wojcik
 Laboratory Director

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Identification and Analytical Requirements Summary

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0346

Customer Sample ID	Laboratory Sample ID	Analytical Requirements				
		MSVOA Method #	MSSEMI Method #	GC* Method #	ME	Other
PW-4	T0346-01	SW8260_W				
PW-5	T0346-02	SW8260_W				
PW-6	T0346-03	SW8260_W				
PW-7	T0346-04	SW8260_W				
PW-8	T0346-05	SW8260_W				

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0346

Laboratory Sample ID	Matrix	Date Collected	Date Received By Lab	Date Extracted	Date Analyzed
SW8260_W					
T0346-01A	AQ	5/17/2017	5/18/2017	NA	5/22/2017
T0346-02A	AQ	5/17/2017	5/18/2017	NA	5/22/2017
T0346-03A	AQ	5/17/2017	5/18/2017	NA	5/22/2017
T0346-04A	AQ	5/17/2017	5/18/2017	NA	5/22/2017
T0346-05A	AQ	5/17/2017	5/18/2017	NA	5/22/2017

Eurofins Spectrum Analytical, Inc. -- ESAI-RI

New York State Department of Environmental Conservation Sample Preparation and Analysis Summary MSVOA

Project Name : Mr. C's Dry Cleaning -- 1703074.0011.07

SDG : T0346

Laboratory Sample ID	Matrix	Analytical Protocol	Extraction Method	Low/Medium Level	Dil/Conc Factor
SW8260_W					
T0346-01A	AQ	SW8260_W	NA	LOW	20
T0346-02A	AQ	SW8260_W	NA	LOW	20
T0346-03A	AQ	SW8260_W	NA	LOW	25
T0346-04A	AQ	SW8260_W	NA	LOW	40
T0346-05A	AQ	SW8260_W	NA	LOW	10

Client ID: ENE

Project: Mr. C's Dry Cleaning

WO Name: Mr. C's Dry Cleaning

Location: MR_C_COMPLIANCE, 1703074.0011.07

Comments: 1 ppb ICAL for VOA. Run Influent sample by 10 X dilution, low result in effluent expected. Upload EDD and report to www.lab.ene.com, have late pentaly, Special invoice paperwork required.

Case:

SDG:

PO: 4500000623-B

HC Due: 05/24/2017

Fax Due: 05/22/2017

Fax Report: ☒

Report Level: ASP-A

Special Program:

EDD: EQUIS_4_NYSDEC_v3

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
T0346-01A	PW-4	05/17/2017 00:00	05/18/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0346-02A	PW-5	05/17/2017 00:00	05/18/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0346-03A	PW-6	05/17/2017 00:00	05/18/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0346-04A	PW-7	05/17/2017 00:00	05/18/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA
T0346-05A	PW-8	05/17/2017 00:00	05/18/2017	Aqueous	SW8260_W	/ OLM_VOA, 1 ppb ICAL				Y	VOA

Sample Transmittal Documentation

Received By: <u>SB</u>		Page 01 of 00			
Reviewed By: <u>RP</u>		Log-in Date 05/18/2017			
Work Order: T0346		Client Name: Ecology and Environment Engineering P.C.			
Project Name/Event: Mr. C's Dry Cleaning / 1703074.0011.07					
Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.		Preservation (pH)		Soil HeadSpace or Air Bubble > or equal to 1/4"	
		Lab Sample ID	HNO3 H2SO4 HCl NaOH H3PO4		VOA Matrix
		T0346-01			H
		T0346-02			H
		T0346-03			H
		T0346-04			H
1. Custody Seal(s) <u>Present / Absent</u> <u>Intact / Broken</u>					
2. Custody Seal Nos. <u>N/A</u>					
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists <u>Present / Absent</u>					
4. Airbill <u>AirBill / Sticker</u> <u>Present / Absent</u>					
5. Airbill No. <u>FedEx 7791 6593 5870</u>					
6. Sample Tags <u>Present / Absent</u> Sample Tag Numbers <u>Listed /</u> <u>Not Listed on Chain-of-Custody</u>					
7. Sample Condition <u>Intact / Broken /</u> <u>Leaking</u>					
8. Cooler Temperature Indicator Bottle <u>Present / Absent</u>					
9. Cooler Temperature <u>5.5 °C</u>					
10. Does information on TR/COCs and sample tags agree? <u>Yes / No</u>					
11. Date Received at Laboratory <u>05/18/2017</u>					
12. Time Received <u>09:30</u>					
Sample Transfer					
Fraction (1) TVOA/VOA		Fraction (2) SVOA/PEST/ARO			
Area #		Area #			
By		By			
On		On			
IR Temp Gun ID: MT-74		VOA Matrix Key: US = Unpreserved Soil A = Air UA = Unpreserved Aqueous H = HCl M = MeOH E = Encore N = NaHSO4 F = Freeze			
Coolant Condition: ICE					
Preservative Name/Lot No:					
		See Sample Condition Notification/Corrective Action Form Yes <u>/</u> No			

* Volatiles *

REPORT NARRATIVE

Eurofins Spectrum Analytical, Inc.

Client : Ecology and Environment Engineering P.C.

Project: Mr. C's Dry Cleaning

Laboratory Workorder / SDG #: T0346

SW846 8260C, VOC by GC-MS (Trace)

I. SAMPLE RECEIPT

No exceptions or unusual conditions were encountered unless a Sample Condition Notification Form, or other record of communication is included with the Sample Receipt Documentation.

II. HOLDING TIMES

A. Sample Preparation:

All samples were prepared within the method-specified holding times.

B. Sample Analysis:

All samples were analyzed within the method-specified holding times.

III. METHODS

Samples were analyzed following procedures in laboratory test code:
SW846 8260C

IV. PREPARATION

Aqueous Samples were prepared following procedures in laboratory test code: SW5030B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V5
Instrument Type: GCMS-VOA
Description: HP6890 / HP6890
Manufacturer: Hewlett-Packard
Model: 6890 / 6890

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Surrogates:

Surrogate standard percent recoveries were within the QC limits.

D. Spikes:

1. Laboratory Control Spikes (LCS):

Percent recoveries for lab control samples were within the QC limits.

2. Matrix Spike / Matrix Spike Duplicate (MS/MSD):

No client-requested MS/MSD analyses were included in this SDG.

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

PW-4 (T0346-01A) : Dilution Factor: 20
PW-5 (T0346-02A) : Dilution Factor: 20
PW-6 (T0346-03A) : Dilution Factor: 25
PW-7 (T0346-04A) : Dilution Factor: 40
PW-8 (T0346-05A) : Dilution Factor: 10

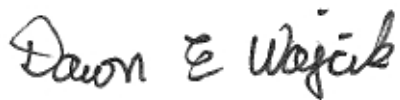
G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Eurofins Spectrum Analytical, Inc. RI, both technically and for completeness, except for the conditions noted above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager or designated person, as verified by the following signature.



Signed: _____

Date: 5/30/17

Data Flag/Qualifiers (Page 1 of 2):

- U Not Detected. This compound was analyzed-for but not detected. For most analyses the reporting limit (lowest standard concentration) is the value listed. For Department of Defense programs, this is the Limit of Detection (LOD).
- J This flag indicates an estimated value due to either
- the compound was detected below the reporting limit, or
 - estimated concentration for Tentatively Identified Compound
- B This flag indicates the compound was also detected in the associated Method Blank. The B flag has an alternative meaning for Inorganics analyses reported using CLP ILM-type metals forms, indicating a “trace” concentration below the reporting limit and equal to or above the detection limit.
- D For Organics analysis, this flag indicates the compound concentration was obtained from a secondary dilution analysis
- E This flag indicates the compound concentration exceeded the Calibration Range. The E flag has an alternative meaning for Inorganics analyses reported using CLP metals forms, indicating an estimated concentration due to the presence of interferences, as determined by the serial dilution analysis.
- P This flag is used for pesticides/PCB/herbicide compound when there is a greater than 40% difference for detected concentration between the two GC columns used for primary and confirmation analyses. This difference typically indicates interference, causing one value to be unusually high. The **lower** of the two values is generally reported on the Form 1, and both values reported on the Form 10.
- A Used to flag semivolatile organic Tentatively Identified Compound library search results for compounds identified as an aldol condensation by-product.

Data Flag/Qualifiers (Page 2 of 2):

- N Used to flag results for volatile and semivolatile Organics analysis Tentatively Identified Compounds where an analyte has passed the identification criteria, and is considered to be positively identified. For Inorganics analysis the N flag indicates the matrix spike recovery falls outside of the control limit.
- * For Inorganics analysis the * flag indicates Relative Percent Difference for duplicate analyses is outside of the control limit.
- L NYSDEC qualifier: Result is biased low due to the sample not being collected according to 5035-L/5035A-L low-level specifications.

Sample ID Suffixes

- DL Diluted analysis. The sample was diluted and reanalyzed. The DL may be followed by a digit if more than one diluted reanalysis is provided. The DL suffix is not attached to an analysis initially performed at dilution, only to reanalyses performed at dilution
- RE Reanalysis. Appended to the client sample ID to indicate a reextraction and reanalysis or a reanalysis of the original sample extract.
- RA Reanalysis. Appended to the laboratory sample ID indicates a reanalysis of the original sample extract.
- RX Reextraction. Appended to the laboratory sample ID indicates a reextraction of the sample.
- MS Matrix Spike.
- MSD Matrix Spike Duplicate
- DUP Duplicate analysis
- SD Serial Dilution
- PS Post-digestion or Post-distillation spike. For metals or inorganic analyses

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86936
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41390.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/22/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	51	
74-87-3	Chloromethane	53	
75-01-4	Vinyl chloride	53	
74-83-9	Bromomethane	54	
75-00-3	Chloroethane	53	
75-69-4	Trichlorofluoromethane	54	
75-35-4	1,1-Dichloroethene	53	
67-64-1	Acetone	53	
75-15-0	Carbon disulfide	54	
75-09-2	Methylene chloride	54	
156-60-5	trans-1,2-Dichloroethene	52	
1634-04-4	Methyl tert-butyl ether	54	
75-34-3	1,1-Dichloroethane	55	
78-93-3	2-Butanone	57	
156-59-2	cis-1,2-Dichloroethene	53	
67-66-3	Chloroform	54	
71-55-6	1,1,1-Trichloroethane	55	
56-23-5	Carbon tetrachloride	56	
107-06-2	1,2-Dichloroethane	55	
71-43-2	Benzene	52	
79-01-6	Trichloroethene	54	
78-87-5	1,2-Dichloropropane	54	
75-27-4	Bromodichloromethane	55	
10061-01-5	cis-1,3-Dichloropropene	54	
108-10-1	4-Methyl-2-pentanone	55	
108-88-3	Toluene	54	
10061-02-6	trans-1,3-Dichloropropene	55	
79-00-5	1,1,2-Trichloroethane	55	
127-18-4	Tetrachloroethene	54	
591-78-6	2-Hexanone	56	
124-48-1	Dibromochloromethane	55	
106-93-4	1,2-Dibromoethane	55	
108-90-7	Chlorobenzene	52	
100-41-4	Ethylbenzene	53	
1330-20-7	Xylene (Total)	160	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCS-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCS-86936
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41390.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/22/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	54	
75-25-2	Bromoform	57	
98-82-8	Isopropylbenzene	53	
79-34-5	1,1,2,2-Tetrachloroethane	54	
541-73-1	1,3-Dichlorobenzene	53	
106-46-7	1,4-Dichlorobenzene	52	
95-50-1	1,2-Dichlorobenzene	53	
96-12-8	1,2-Dibromo-3-chloropropane	54	
120-82-1	1,2,4-Trichlorobenzene	54	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	52	
110-82-7	Cyclohexane	53	
79-20-9	Methyl acetate	56	
108-87-2	Methylcyclohexane	51	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86936

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41391.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	48	
74-87-3	Chloromethane	50	
75-01-4	Vinyl chloride	50	
74-83-9	Bromomethane	50	
75-00-3	Chloroethane	50	
75-69-4	Trichlorofluoromethane	51	
75-35-4	1,1-Dichloroethene	49	
67-64-1	Acetone	52	
75-15-0	Carbon disulfide	50	
75-09-2	Methylene chloride	51	
156-60-5	trans-1,2-Dichloroethene	49	
1634-04-4	Methyl tert-butyl ether	51	
75-34-3	1,1-Dichloroethane	52	
78-93-3	2-Butanone	53	
156-59-2	cis-1,2-Dichloroethene	50	
67-66-3	Chloroform	51	
71-55-6	1,1,1-Trichloroethane	51	
56-23-5	Carbon tetrachloride	52	
107-06-2	1,2-Dichloroethane	52	
71-43-2	Benzene	50	
79-01-6	Trichloroethene	50	
78-87-5	1,2-Dichloropropane	51	
75-27-4	Bromodichloromethane	52	
10061-01-5	cis-1,3-Dichloropropene	50	
108-10-1	4-Methyl-2-pentanone	53	
108-88-3	Toluene	50	
10061-02-6	trans-1,3-Dichloropropene	51	
79-00-5	1,1,2-Trichloroethane	51	
127-18-4	Tetrachloroethene	49	
591-78-6	2-Hexanone	53	
124-48-1	Dibromochloromethane	52	
106-93-4	1,2-Dibromoethane	52	
108-90-7	Chlorobenzene	49	
100-41-4	Ethylbenzene	50	
1330-20-7	Xylene (Total)	150	

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LCSD-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: LCSD-86936
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41391.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/22/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	51	
75-25-2	Bromoform	55	
98-82-8	Isopropylbenzene	50	
79-34-5	1,1,2,2-Tetrachloroethane	52	
541-73-1	1,3-Dichlorobenzene	50	
106-46-7	1,4-Dichlorobenzene	50	
95-50-1	1,2-Dichlorobenzene	51	
96-12-8	1,2-Dibromo-3-chloropropane	54	
120-82-1	1,2,4-Trichlorobenzene	52	
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	50	
110-82-7	Cyclohexane	50	
79-20-9	Methyl acetate	52	
108-87-2	Methylcyclohexane	48	

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86936

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41393.D

Level: (TRACE/LOW/MED) LOW Date Received: _____

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
75-35-4	1,1-Dichloroethene	1.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	1.0	U
75-09-2	Methylene chloride	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl tert-butyl ether	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
56-23-5	Carbon tetrachloride	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
71-43-2	Benzene	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (Total)	1.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

MB-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: MB-86936
Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41393.D
Level: (TRACE/LOW/MED) LOW Date Received: _____
% Moisture: not dec. Date Analyzed: 05/22/2017
GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 1.0
Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U
110-82-7	Cyclohexane	1.0	U
79-20-9	Methyl acetate	1.0	U
108-87-2	Methylcyclohexane	1.0	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41398.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	64	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	160	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	2200	
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-4

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-01A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41398.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-02A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41399.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl chloride	86	
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
75-35-4	1,1-Dichloroethene	20	U
67-64-1	Acetone	100	U
75-15-0	Carbon disulfide	20	U
75-09-2	Methylene chloride	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl tert-butyl ether	20	U
75-34-3	1,1-Dichloroethane	20	U
78-93-3	2-Butanone	100	U
156-59-2	cis-1,2-Dichloroethene	350	
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon tetrachloride	20	U
107-06-2	1,2-Dichloroethane	20	U
71-43-2	Benzene	20	U
79-01-6	Trichloroethene	97	
78-87-5	1,2-Dichloropropane	20	U
75-27-4	Bromodichloromethane	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	20	U
10061-02-6	trans-1,3-Dichloropropene	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	2300	
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (Total)	20	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-5

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-02A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41399.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 20.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
541-73-1	1,3-Dichlorobenzene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
96-12-8	1,2-Dibromo-3-chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	20	U
110-82-7	Cyclohexane	20	U
79-20-9	Methyl acetate	20	U
108-87-2	Methylcyclohexane	20	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41397.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 25.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) ug/L	Q
75-71-8	Dichlorodifluoromethane	25	U
74-87-3	Chloromethane	25	U
75-01-4	Vinyl chloride	25	U
74-83-9	Bromomethane	25	U
75-00-3	Chloroethane	25	U
75-69-4	Trichlorofluoromethane	25	U
75-35-4	1,1-Dichloroethene	25	U
67-64-1	Acetone	130	U
75-15-0	Carbon disulfide	25	U
75-09-2	Methylene chloride	25	U
156-60-5	trans-1,2-Dichloroethene	25	U
1634-04-4	Methyl tert-butyl ether	25	U
75-34-3	1,1-Dichloroethane	25	U
78-93-3	2-Butanone	130	U
156-59-2	cis-1,2-Dichloroethene	200	
67-66-3	Chloroform	25	U
71-55-6	1,1,1-Trichloroethane	25	U
56-23-5	Carbon tetrachloride	25	U
107-06-2	1,2-Dichloroethane	25	U
71-43-2	Benzene	25	U
79-01-6	Trichloroethene	160	
78-87-5	1,2-Dichloropropane	25	U
75-27-4	Bromodichloromethane	25	U
10061-01-5	cis-1,3-Dichloropropene	25	U
108-10-1	4-Methyl-2-pentanone	130	U
108-88-3	Toluene	25	U
10061-02-6	trans-1,3-Dichloropropene	25	U
79-00-5	1,1,2-Trichloroethane	25	U
127-18-4	Tetrachloroethene	3300	
591-78-6	2-Hexanone	130	U
124-48-1	Dibromochloromethane	25	U
106-93-4	1,2-Dibromoethane	25	U
108-90-7	Chlorobenzene	25	U
100-41-4	Ethylbenzene	25	U
1330-20-7	Xylene (Total)	25	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-6

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-03A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41397.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 25.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	25	U
75-25-2	Bromoform	25	U
98-82-8	Isopropylbenzene	25	U
79-34-5	1,1,2,2-Tetrachloroethane	25	U
541-73-1	1,3-Dichlorobenzene	25	U
106-46-7	1,4-Dichlorobenzene	25	U
95-50-1	1,2-Dichlorobenzene	25	U
96-12-8	1,2-Dibromo-3-chloropropane	25	U
120-82-1	1,2,4-Trichlorobenzene	25	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	25	U
110-82-7	Cyclohexane	25	U
79-20-9	Methyl acetate	25	U
108-87-2	Methylcyclohexane	25	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-7

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-04A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41396.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 40.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	40	U
74-87-3	Chloromethane	40	U
75-01-4	Vinyl chloride	500	
74-83-9	Bromomethane	40	U
75-00-3	Chloroethane	40	U
75-69-4	Trichlorofluoromethane	40	U
75-35-4	1,1-Dichloroethene	40	U
67-64-1	Acetone	200	U
75-15-0	Carbon disulfide	40	U
75-09-2	Methylene chloride	40	U
156-60-5	trans-1,2-Dichloroethene	40	U
1634-04-4	Methyl tert-butyl ether	40	U
75-34-3	1,1-Dichloroethane	40	U
78-93-3	2-Butanone	200	U
156-59-2	cis-1,2-Dichloroethene	6300	
67-66-3	Chloroform	40	U
71-55-6	1,1,1-Trichloroethane	40	U
56-23-5	Carbon tetrachloride	40	U
107-06-2	1,2-Dichloroethane	40	U
71-43-2	Benzene	40	U
79-01-6	Trichloroethene	790	
78-87-5	1,2-Dichloropropane	40	U
75-27-4	Bromodichloromethane	40	U
10061-01-5	cis-1,3-Dichloropropene	40	U
108-10-1	4-Methyl-2-pentanone	200	U
108-88-3	Toluene	40	U
10061-02-6	trans-1,3-Dichloropropene	40	U
79-00-5	1,1,2-Trichloroethane	40	U
127-18-4	Tetrachloroethene	3600	
591-78-6	2-Hexanone	200	U
124-48-1	Dibromochloromethane	40	U
106-93-4	1,2-Dibromoethane	40	U
108-90-7	Chlorobenzene	40	U
100-41-4	Ethylbenzene	40	U
1330-20-7	Xylene (Total)	40	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-7

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-04A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41396.D
 Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017
 % Moisture: not dec. Date Analyzed: 05/22/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 40.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	40	U
75-25-2	Bromoform	40	U
98-82-8	Isopropylbenzene	40	U
79-34-5	1,1,2,2-Tetrachloroethane	40	U
541-73-1	1,3-Dichlorobenzene	40	U
106-46-7	1,4-Dichlorobenzene	40	U
95-50-1	1,2-Dichlorobenzene	40	U
96-12-8	1,2-Dibromo-3-chloropropane	40	U
120-82-1	1,2,4-Trichlorobenzene	40	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	40	U
110-82-7	Cyclohexane	40	U
79-20-9	Methyl acetate	40	U
108-87-2	Methylcyclohexane	40	U

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-05A

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41400.D

Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017

% Moisture: not dec. Date Analyzed: 05/22/2017

GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0

Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)

Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl chloride	170	
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
75-35-4	1,1-Dichloroethene	10	U
67-64-1	Acetone	50	U
75-15-0	Carbon disulfide	10	U
75-09-2	Methylene chloride	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl tert-butyl ether	12	
75-34-3	1,1-Dichloroethane	10	U
78-93-3	2-Butanone	50	U
156-59-2	cis-1,2-Dichloroethene	1100	
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon tetrachloride	10	U
107-06-2	1,2-Dichloroethane	10	U
71-43-2	Benzene	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
75-27-4	Bromodichloromethane	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	82	
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (Total)	10	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PW-8

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
 Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: T0346-05A
 Sample wt/vol: 5.00 (g/mL) ML Lab File ID: V5R41400.D
 Level: (TRACE/LOW/MED) LOW Date Received: 05/18/2017
 % Moisture: not dec. Date Analyzed: 05/22/2017
 GC Column: DB-624 ID: 0.25 (mm) Dilution Factor: 10.0
 Soil Extract Volume: _____ (uL) Soil Aliquot Volume: _____ (uL)
 Purge Volume: 5.0 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) <u>UG/L</u>	Q
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
541-73-1	1,3-Dichlorobenzene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
96-12-8	1,2-Dibromo-3-chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	10	U
110-82-7	Cyclohexane	10	U
79-20-9	Methyl acetate	10	U
108-87-2	Methylcyclohexane	10	U

2B - FORM II VOA-2
WATER VOLATILE DEUTERATED MONITORING COMPOUND RECOVERY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346

Level: (TRACE or LOW) LOW

	EPA SAMPLE NO.	VDMC1 (DBFM) #	VDMC2 (DCE) #	VDMC3 (TOL) #	VDMC4 (BFB) #				TOT OUT
01	LCS-86936	101	102	100	99				0
02	LCSD-86936	101	100	100	100				0
03	MB-86936	100	100	99	98				0
04	PW-7	101	101	98	96				0
05	PW-6	101	99	100	97				0
06	PW-4	100	99	99	98				0
07	PW-5	100	102	98	96				0
08	PW-8	101	101	98	96				0

QC LIMITS
(85-115)
(70-120)
(85-120)
(75-120)

VDMC1 (DBFM) Dibromofluoromethane
VDMC2 (DCE) = 1,2-Dichloroethane-d4
VDMC3 (TOL) = Toluene-d8
VDMC4 (BFB) = Bromofluorobenzene

Column to be used to flag recovery values
* Values outside of contract required QC limits

som15.09.23.1015

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: SDG No.: ST0346

Lab Sample ID: LCS-86936 LCS Lot No.:

Date Extracted: 05/19/2017 Date Analyzed (1): 05/22/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
Dichlorodifluoromethane	50.0000	0.0000	51.0412	102		30 - 155
Chloromethane	50.0000	0.0000	52.7613	106		40 - 125
Vinyl chloride	50.0000	0.0000	53.3378	107		50 - 145
Bromomethane	50.0000	0.0000	54.1981	108		30 - 145
Chloroethane	50.0000	0.0000	53.3110	107		60 - 135
Trichlorofluoromethane	50.0000	0.0000	54.3172	109		60 - 145
1,1-Dichloroethene	50.0000	0.0000	52.5193	105		70 - 130
Acetone	50.0000	0.0000	52.8625	106		40 - 140
Carbon disulfide	50.0000	0.0000	53.6140	107		35 - 160
Methylene chloride	50.0000	0.0000	53.6767	107		55 - 140
trans-1,2-Dichloroethene	50.0000	0.0000	51.7603	104		60 - 140
Methyl tert-butyl ether	50.0000	0.0000	54.2651	109		65 - 125
1,1-Dichloroethane	50.0000	0.0000	55.0139	110		70 - 135
2-Butanone	50.0000	0.0000	56.8579	114		30 - 150
cis-1,2-Dichloroethene	50.0000	0.0000	52.6662	105		70 - 125
Chloroform	50.0000	0.0000	53.8530	108		65 - 135
1,1,1-Trichloroethane	50.0000	0.0000	54.5295	109		65 - 130
Carbon tetrachloride	50.0000	0.0000	55.5437	111		65 - 140
1,2-Dichloroethane	50.0000	0.0000	54.6984	109		70 - 130
Benzene	50.0000	0.0000	52.4970	105		80 - 120
Trichloroethene	50.0000	0.0000	53.5033	107		70 - 125
1,2-Dichloropropane	50.0000	0.0000	54.0297	108		75 - 125
Bromodichloromethane	50.0000	0.0000	54.5303	109		75 - 120
cis-1,3-Dichloropropene	50.0000	0.0000	53.6354	107		70 - 130
4-Methyl-2-pentanone	50.0000	0.0000	55.4468	111		60 - 135
Toluene	50.0000	0.0000	53.7026	107		75 - 120
trans-1,3-Dichloropropene	50.0000	0.0000	54.5466	109		55 - 140
1,1,2-Trichloroethane	50.0000	0.0000	54.6914	109		75 - 125
Tetrachloroethene	50.0000	0.0000	53.9695	108		45 - 150
2-Hexanone	50.0000	0.0000	55.6368	111		55 - 130
Dibromochloromethane	50.0000	0.0000	54.6940	109		60 - 135
1,2-Dibromoethane	50.0000	0.0000	54.8656	110		80 - 120
Chlorobenzene	50.0000	0.0000	51.7995	104		80 - 120
Ethylbenzene	50.0000	0.0000	52.8187	106		75 - 125
Xylene (Total)	150.0000	0.0000	157.6450	105		81 - 121
Styrene	50.0000	0.0000	54.1596	108		65 - 135
Bromoform	50.0000	0.0000	57.4003	115		70 - 130
Isopropylbenzene	50.0000	0.0000	53.3834	107		75 - 125
1,1,2,2-Tetrachloroethane	50.0000	0.0000	53.6097	107		65 - 130
1,3-Dichlorobenzene	50.0000	0.0000	52.8962	106		75 - 125
1,4-Dichlorobenzene	50.0000	0.0000	52.3816	105		75 - 125
1,2-Dichlorobenzene	50.0000	0.0000	52.7253	105		70 - 120
1,2-Dibromo-3-chloropropan	50.0000	0.0000	53.9137	108		50 - 130
1,2,4-Trichlorobenzene	50.0000	0.0000	54.3716	109		65 - 135

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE RECOVERY

EPA SAMPLE NO.

LCS-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
Lab Sample ID: LCS-86936 LCS Lot No.: _____
Date Extracted: 05/19/2017 Date Analyzed (1): 05/22/2017

COMPOUND	SPIKE ADDED	SAMPLE CONCENTRATION	LCS CONCENTRATION	LCS %REC	#	QC. LIMITS REC.
1,1,2-Trichloro-1,2,2-trif	50.0000	0.0000	52.2435	104		70 - 130
Cyclohexane	50.0000	0.0000	52.8643	106		70 - 130
Methyl acetate	50.0000	0.0000	55.9055	112		70 - 130
Methylcyclohexane	50.0000	0.0000	51.0733	102		70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS: _____

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract:

Lab Code: ESAI-RI Case No.: T0346

Mod. Ref No.:

SDG No.: ST0346

Lab Sample ID: LCSD-86936

LCS Lot No.:

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC #		%RPD #		QC LIMITS	
							RPD	REC.
Dichlorodifluoromethane	50.0000	48.4286	97		5		30	30 - 155
Chloromethane	50.0000	49.7041	99		7		30	40 - 125
Vinyl chloride	50.0000	49.9348	100		7		30	50 - 145
Bromomethane	50.0000	49.9637	100		8		30	30 - 145
Chloroethane	50.0000	49.7932	100		7		30	60 - 135
Trichlorofluoromethane	50.0000	51.2082	102		7		30	60 - 145
1,1-Dichloroethene	50.0000	49.0714	98		7		30	70 - 130
Acetone	50.0000	51.7398	103		3		30	40 - 140
Carbon disulfide	50.0000	50.1317	100		7		30	35 - 160
Methylene chloride	50.0000	50.7709	102		5		30	55 - 140
trans-1,2-Dichloroethene	50.0000	48.9575	98		6		30	60 - 140
Methyl tert-butyl ether	50.0000	51.2102	102		7		30	65 - 125
1,1-Dichloroethane	50.0000	51.8307	104		6		30	70 - 135
2-Butanone	50.0000	52.8025	106		7		30	30 - 150
cis-1,2-Dichloroethene	50.0000	49.9982	100		5		30	70 - 125
Chloroform	50.0000	51.2769	103		5		30	65 - 135
1,1,1-Trichloroethane	50.0000	50.9650	102		7		30	65 - 130
Carbon tetrachloride	50.0000	51.9735	104		7		30	65 - 140
1,2-Dichloroethane	50.0000	51.9016	104		5		30	70 - 130
Benzene	50.0000	49.7519	100		5		30	80 - 120
Trichloroethene	50.0000	49.7504	100		7		30	70 - 125
1,2-Dichloropropane	50.0000	51.0229	102		6		30	75 - 125
Bromodichloromethane	50.0000	51.8346	104		5		30	75 - 120
cis-1,3-Dichloropropene	50.0000	50.4151	101		6		30	70 - 130
4-Methyl-2-pentanone	50.0000	53.1104	106		5		30	60 - 135
Toluene	50.0000	50.1091	100		7		30	75 - 120
trans-1,3-Dichloropropene	50.0000	51.1827	102		7		30	55 - 140
1,1,2-Trichloroethane	50.0000	50.9499	102		7		30	75 - 125
Tetrachloroethene	50.0000	49.2155	98		10		30	45 - 150
2-Hexanone	50.0000	53.0559	106		5		30	55 - 130
Dibromochloromethane	50.0000	52.2094	104		5		30	60 - 135
1,2-Dibromoethane	50.0000	51.7069	103		7		30	80 - 120
Chlorobenzene	50.0000	49.3185	99		5		30	80 - 120
Ethylbenzene	50.0000	49.6715	99		7		30	75 - 125
Xylene (Total)	150.0000	148.7182	99		6		30	81 - 121
Styrene	50.0000	51.1732	102		6		30	65 - 135
Bromoform	50.0000	55.2231	110		4		30	70 - 130
Isopropylbenzene	50.0000	49.6869	99		8		30	75 - 125
1,1,2,2-Tetrachloroethane	50.0000	51.7597	104		3		30	65 - 130
1,3-Dichlorobenzene	50.0000	50.3193	101		5		30	75 - 125
1,4-Dichlorobenzene	50.0000	49.5754	99		6		30	75 - 125
1,2-Dichlorobenzene	50.0000	50.8075	102		3		30	70 - 120
1,2-Dibromo-3-chloropropan	50.0000	53.9603	108		0		30	50 - 130
1,2,4-Trichlorobenzene	50.0000	51.5524	103		6		30	65 - 135
1,1,2-Trichloro-1,2,2-trif	50.0000	49.9594	100		4		30	70 - 130
Cyclohexane	50.0000	49.9715	100		6		30	70 - 130

3 - FORM III
WATER LABORATORY CONTROL
SAMPLE DUPLICATE RECOVERY

EPA SAMPLE NO.

LCSD-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
Lab Sample ID: LCSD-86936 LCS Lot No.: _____

COMPOUND	SPIKE ADDED	LCSD CONCENTRATION	LCSD %REC	#	%RPD	#	QC LIMITS	
							RPD	REC.
Methyl acetate	50.0000	51.8883	104		7		30	70 - 130
Methylcyclohexane	50.0000	48.2455	96		6		30	70 - 130

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 48 outside limits

Spike Recovery: 0 out of 48 outside limits

COMMENTS: _____

4A - FORM IV VOA
VOLATILE METHOD BLANK SUMMARY

EPA SAMPLE NO.

MB-86936

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
Lab File ID: V5R41393.D Lab Sample ID: MB-86936
Instrument ID: V5
Matrix: (SOIL/SED/WATER) WATER Date Analyzed: 05/22/2017
Level: (TRACE or LOW/MED) LOW Time Analyzed: 15:11
GC Column: DB-624 ID: 0.25 (mm) Heated Purge: (Y/N) N

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS-86936	LCS-86936	V5R41390.D	13:54
02	LCSD-86936	LCSD-86936	V5R41391.D	14:20
03	PW-7	T0346-04A	V5R41396.D	17:01
04	PW-6	T0346-03A	V5R41397.D	17:27
05	PW-4	T0346-01A	V5R41398.D	17:52
06	PW-5	T0346-02A	V5R41399.D	18:18
07	PW-8	T0346-05A	V5R41400.D	18:44

COMMENTS: _____

8A - FORM VIII VOA
VOLATILE INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: EUROFINS SPECTRUM ANALYTICAL, INC. Contract: _____
 Lab Code: ESAI-RI Case No.: T0346 Mod. Ref No.: _____ SDG No.: ST0346
 GC Column: DB-624 ID: 0.25 (mm) Init. Calib. Date(s): 05/22/2017 05/22/2017
 EPA Sample No.(VSTD#####): VSTD0505M Date Analyzed: 05/22/2017
 Lab File ID (Standard): V5R41386.D Time Analyzed: 11:56
 Instrument ID: V5 Heated Purge: (Y/N) N

		IS1 (S1)		IS2 (S2)		IS3 (S3)	
		AREA	#	AREA	#	AREA	#
	12 HOUR STD	374172	5.446	253787	8.902	114539	12.063
	UPPER LIMIT	748344	5.946	507574	9.402	229078	12.563
	LOWER LIMIT	187086	4.946	126894	8.402	57270	11.563
	EPA SAMPLE NO.						
01	LCS-86936	378067	5.448	257401	8.904	118291	12.064
02	LCSD-86936	369943	5.447	251012	8.903	113925	12.064
03	MB-86936	368257	5.447	250953	8.903	114950	12.063
04	PW-7	351494	5.446	240492	8.901	109309	12.062
05	PW-6	339052	5.446	230791	8.902	103810	12.062
06	PW-4	336225	5.447	227711	8.903	101730	12.063
07	PW-5	335861	5.452	229462	8.908	102054	12.058
08	PW-8	333026	5.446	228013	8.902	102904	12.062

IS1 () = Fluorobenzene

IS2 () = Chlorobenzene-d5

IS3 () = 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = 200% (Low-Medium Volatiles) and 140% (Trace Volatiles) of internal standard area

AREA LOWER LIMIT = 50% (Low-Medium Volatiles) and 60% (Trace Volatiles) of internal standard area

RT UPPER LIMIT = +0.50 (Low-Medium Volatiles) and +0.33 (Trace Volatiles) minutes of internal standard RT

RT LOWER LIMIT = -0.50 (Low-Medium Volatiles) and -0.33 (Trace Volatiles) minutes of internal standard RT

Column used to flag values outside contract required QC limits with an asterisk.

Last Page of Data Report

Report Date:
10-Jul-17 17:35**Laboratory Report**
SC36550Ecology and Environment, Inc.
368 Pleasant View Drive
Lancaster, NY 14086
Attn: Mike SteffanProject: Mr. C's - East Aurora, NY
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393Authorized by:
Christina White
Laboratory Director

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 30 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis is transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC36550
Project: Mr. C's - East Aurora, NY
Project Number: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC36550-01	PW-4	Ground Water	29-Jun-17 12:30	30-Jun-17 10:33
SC36550-02	PW-5	Ground Water	29-Jun-17 13:00	30-Jun-17 10:33
SC36550-03	PW-6	Ground Water	29-Jun-17 13:30	30-Jun-17 10:33
SC36550-04	PW-7	Ground Water	29-Jun-17 14:00	30-Jun-17 10:33
SC36550-05	PW-8	Ground Water	29-Jun-17 14:30	30-Jun-17 10:33

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 3.7 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

July 10, 2017 Report Revision Case Narrative:

This report has been revised to correct the analyte list.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C**Calibration:**

1706078

Analyte quantified by quadratic equation type calibration.

Bromomethane

This affected the following samples:

1711409-BLK1
1711409-BLK2
1711409-BS1
1711409-BS2
1711409-BSD1
1711409-BSD2
PW-4
PW-5
PW-6
PW-7
PW-8
S705668-ICV1
S706028-CCV1

Blanks:

1711409-BLK1

The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.

Bromoform
Hexachlorobutadiene
Naphthalene

Laboratory Control Samples:

1711409 BS/BSD

Laboratory Control Samples:1711409 BS/BSD

1,3-Dichlorobenzene percent recoveries (139/119) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-4
PW-5
PW-6
PW-7
PW-8

1,3-Dichlorobenzene percent recoveries (150/128) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-4
PW-5
PW-6
PW-7
PW-8

Dichlorodifluoromethane (Freon12) percent recoveries (137/121) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-4
PW-5
PW-6
PW-7
PW-8

Isopropylbenzene percent recoveries (134/113) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-4
PW-5
PW-6
PW-7
PW-8

Methyl acetate percent recoveries (112/131) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-4
PW-5
PW-6
PW-7
PW-8

Methyl acetate percent recoveries (66/66) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PW-4
PW-5
PW-6
PW-7
PW-8

1711409 BSD

2-Butanone (MEK) RPD 21% (20%) is outside individual acceptance criteria.

1711409-BS1

SW846 8260C

Laboratory Control Samples:

1711409-BS1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
Bromoform
Hexachlorobutadiene
Methyl acetate
Naphthalene

1711409-BS2

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
Bromoform
Hexachlorobutadiene
Methyl acetate
Naphthalene

1711409-BSD1

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
Bromoform
Hexachlorobutadiene
Methyl acetate
Naphthalene

1711409-BSD2

Analyte is found in the associated blank as well as in the sample (CLP B-flag).

1,2,3-Trichlorobenzene
1,2,4-Trichlorobenzene
Bromoform
Hexachlorobutadiene
Methyl acetate
Naphthalene

Samples:

S706028-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,1,1,2-Tetrachloroethane (20.6%)
1,1,2,2-Tetrachloroethane (21.4%)
1,3-Dichlorobenzene (39.3%)
Bromobenzene (26.8%)
Carbon tetrachloride (21.9%)
Isopropylbenzene (25.0%)
Methyl acetate (-33.9%)
Tetrachloroethene (22.2%)
Tetrahydrofuran (-29.8%)

SW846 8260C

Samples:

S706028-CCV1

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

Bromoform (21.6%)
Dichlorodifluoromethane (Freon12) (37.4%)
sec-Butylbenzene (24.6%)
tert-Butylbenzene (21.0%)

This affected the following samples:

1711409-BLK1
1711409-BLK2
1711409-BS1
1711409-BS2
1711409-BSD1
1711409-BSD2
PW-4
PW-5
PW-6
PW-7
PW-8

SC36550-01 *PW-4*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36550-02 *PW-5*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36550-03 *PW-6*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36550-04 *PW-7*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36550-05 *PW-8*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Acceptance Check Form

Client: Ecology and Environment, Inc.
Project: Mr. C's - East Aurora, NY / [none]
Work Order: SC36550
Sample(s) received on: 6/30/2017

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	☒	☐	☐
Were custody seals intact?	☒	☐	☐
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	☒	☐	☐
Were samples cooled on ice upon transfer to laboratory representative?	☒	☐	☐
Were sample containers received intact?	☒	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☒	☐	☐
Were samples accompanied by a Chain of Custody document?	☒	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☒	☐	☐
Did sample container labels agree with Chain of Custody document?	☒	☐	☐
Were samples received within method-specific holding times?	☒	☐	☐

Summary of Hits

Lab ID: SC36550-01

Client ID: PW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	1590	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	914	D	50.0	µg/l	SW846 8260C
Trichloroethene	134	D	50.0	µg/l	SW846 8260C
Vinyl chloride	168	D	50.0	µg/l	SW846 8260C

Lab ID: SC36550-02

Client ID: PW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	468	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	1510	D	50.0	µg/l	SW846 8260C
Trichloroethene	74.5	D	50.0	µg/l	SW846 8260C
Vinyl chloride	109	D	50.0	µg/l	SW846 8260C

Lab ID: SC36550-03

Client ID: PW-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	204	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	2300	D	50.0	µg/l	SW846 8260C
Trichloroethene	154	D	50.0	µg/l	SW846 8260C

Lab ID: SC36550-04

Client ID: PW-7

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	7700	D	100	µg/l	SW846 8260C
Tetrachloroethene	3340	D	100	µg/l	SW846 8260C
Trichloroethene	565	D	100	µg/l	SW846 8260C
Vinyl chloride	639	D	100	µg/l	SW846 8260C

Lab ID: SC36550-05

Client ID: PW-8

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	436	D	5.00	µg/l	SW846 8260C
Methyl tert-butyl ether	7.75	D	5.00	µg/l	SW846 8260C
Tetrachloroethene	67.0	D	5.00	µg/l	SW846 8260C
Trichloroethene	5.80	D	5.00	µg/l	SW846 8260C
Vinyl chloride	112	D	5.00	µg/l	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

PW-4

SC36550-01

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 12:30

Received

30-Jun-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	1,590	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	914	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	134	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-4

SC36550-01

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 12:30

Received

30-Jun-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
----------------	-------------------	---------------	-------------	--------------	-------------	------------	-----------------	--------------------	-----------------	-----------------	----------------	--------------	--------------

Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	168	D	µg/l	50.0	23.6	50	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	90			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	103			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	105			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	88			70-130 %			"	"	"	"	"	

Sample Identification

PW-5

SC36550-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 13:00

Received

30-Jun-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	468	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	1,510	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	74.5	D	µg/l	50.0	24.8	50	"	"	"	"	"	X
75-01-4	Vinyl chloride	109	D	µg/l	50.0	23.6	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-5

SC36550-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 13:00

Received

30-Jun-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	88			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	103			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	106			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	89			70-130 %			"	"	"	"	"	

Sample Identification

PW-6

SC36550-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 13:30

Received

30-Jun-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	204	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	2,300	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	154	D	µg/l	50.0	24.8	50	"	"	"	"	"	X
75-01-4	Vinyl chloride	< 50.0	U, D	µg/l	50.0	23.6	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-6

SC36550-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 13:30

Received

30-Jun-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	88			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	101			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	106			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	91			70-130 %			"	"	"	"	"	

Sample Identification

PW-7

SC36550-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 14:00

Received

30-Jun-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	7,700	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 100	U, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	3,340	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	565	D	µg/l	100	49.7	100	"	"	"	"	"	X
75-01-4	Vinyl chloride	639	D	µg/l	100	47.2	100	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-7

SC36550-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 14:00

Received

30-Jun-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

1330-20-7	Total Xylenes	< 100	U, D	µg/l	100	28.3	100	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	88			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	103			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	106			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	90			70-130 %			"	"	"	"	"	

Sample Identification

PW-8

SC36550-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 14:30

Received

30-Jun-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00	U, D	µg/l	5.00	2.66	5	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
67-64-1	Acetone	< 50.0	U, D	µg/l	50.0	4.02	5	"	"	"	"	"	X
71-43-2	Benzene	< 5.00	U, D	µg/l	5.00	1.42	5	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 2.50	U, D	µg/l	2.50	2.08	5	"	"	"	"	"	X
75-25-2	Bromoform	< 5.00	U, D	µg/l	5.00	2.12	5	"	"	"	"	"	X
74-83-9	Bromomethane	< 10.0	U, D	µg/l	10.0	4.48	5	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 10.0	U, D	µg/l	10.0	5.35	5	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 10.0	U, D	µg/l	10.0	2.06	5	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 5.00	U, D	µg/l	5.00	2.18	5	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 5.00	U, D	µg/l	5.00	1.24	5	"	"	"	"	"	X
75-00-3	Chloroethane	< 10.0	U, D	µg/l	10.0	2.94	5	"	"	"	"	"	X
67-66-3	Chloroform	< 5.00	U, D	µg/l	5.00	1.63	5	"	"	"	"	"	X
74-87-3	Chloromethane	< 10.0	U, D	µg/l	10.0	1.84	5	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 10.0	U, D	µg/l	10.0	4.32	5	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 2.50	U, D	µg/l	2.50	1.58	5	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 2.50	U, D	µg/l	2.50	1.01	5	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.00	U, D	µg/l	5.00	1.38	5	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.00	U, D	µg/l	5.00	1.57	5	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 10.0	U, D	µg/l	10.0	2.92	5	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 5.00	U, D	µg/l	5.00	1.62	5	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 5.00	U, D	µg/l	5.00	1.38	5	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 5.00	U, D	µg/l	5.00	3.46	5	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	436	D	µg/l	5.00	1.64	5	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 5.00	U, D	µg/l	5.00	1.88	5	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 5.00	U, D	µg/l	5.00	1.46	5	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 2.50	U, D	µg/l	2.50	1.80	5	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 2.50	U, D	µg/l	2.50	1.74	5	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 5.00	U, D	µg/l	5.00	1.64	5	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 10.0	U, D	µg/l	10.0	2.64	5	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 5.00	U, D	µg/l	5.00	1.80	5	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	7.75	D	µg/l	5.00	1.18	5	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0	U, D	µg/l	10.0	2.58	5	"	"	"	"	"	X
75-09-2	Methylene chloride	< 10.0	U, D	µg/l	10.0	3.30	5	"	"	"	"	"	X
100-42-5	Styrene	< 5.00	U, D	µg/l	5.00	2.02	5	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 2.50	U, D	µg/l	2.50	1.65	5	"	"	"	"	"	X
127-18-4	Tetrachloroethene	67.0	D	µg/l	5.00	2.85	5	"	"	"	"	"	X
108-88-3	Toluene	< 5.00	U, D	µg/l	5.00	1.50	5	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.00	U, D	µg/l	5.00	1.89	5	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 5.00	U, D	µg/l	5.00	2.54	5	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.00	U, D	µg/l	5.00	1.65	5	"	"	"	"	"	X
79-01-6	Trichloroethene	5.80	D	µg/l	5.00	2.48	5	"	"	"	"	"	X
75-01-4	Vinyl chloride	112	D	µg/l	5.00	2.36	5	"	"	"	"	"	X

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Sample Identification

PW-8

SC36550-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

29-Jun-17 14:30

Received

30-Jun-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

1330-20-7	Total Xylenes	< 5.00	U, D	µg/l	5.00	1.42	5	SW846 8260C	06-Jul-17	06-Jul-17	GMA	1711409	X
110-82-7	Cyclohexane	< 25.0	U, D	µg/l	25.0	3.94	5	"	"	"	"	"	X
79-20-9	Methyl acetate	< 25.0	U, D	µg/l	25.0	3.24	5	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 25.0	U, D	µg/l	25.0	3.71	5	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	90			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	103			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	106			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	99			70-130 %			"	"	"	"	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
Blank (1711409-BLK1)					<u>Prepared & Analyzed: 06-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Acrylonitrile	< 0.50	U	µg/l	0.50						
Benzene	< 1.00	U	µg/l	1.00						
Bromobenzene	< 1.00	U	µg/l	1.00						
Bromochloromethane	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	20.0	QB2	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
n-Butylbenzene	0.71	J	µg/l	1.00						
sec-Butylbenzene	< 1.00	U	µg/l	1.00						
tert-Butylbenzene	< 1.00	U	µg/l	1.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
2-Chlorotoluene	< 1.00	U	µg/l	1.00						
4-Chlorotoluene	< 1.00	U	µg/l	1.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
Dibromomethane	< 1.00	U	µg/l	1.00						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
1,3-Dichloropropane	< 1.00	U	µg/l	1.00						
2,2-Dichloropropane	< 1.00	U	µg/l	1.00						
1,1-Dichloropropene	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
Hexachlorobutadiene	0.82	QB2	µg/l	0.50						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
4-Isopropyltoluene	0.53	J	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Naphthalene	1.33	QB2	µg/l	1.00						
n-Propylbenzene	< 1.00	U	µg/l	1.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
Blank (1711409-BLK1)					Prepared & Analyzed: 06-Jul-17					
Styrene	< 1.00	U	µg/l	1.00						
1,1,1,2-Tetrachloroethane	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,3-Trichlorobenzene	0.94	J	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,3,5-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Trichlorofluoromethane (Freon 11)	< 1.00	U	µg/l	1.00						
1,2,3-Trichloropropane	< 1.00	U	µg/l	1.00						
1,2,4-Trimethylbenzene	< 1.00	U	µg/l	1.00						
1,3,5-Trimethylbenzene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						
m,p-Xylene	< 2.00	U	µg/l	2.00						
o-Xylene	< 1.00	U	µg/l	1.00						
Tetrahydrofuran	< 2.00	U	µg/l	2.00						
Ethyl ether	< 1.00	U	µg/l	1.00						
Tert-amyl methyl ether	< 1.00	U	µg/l	1.00						
Ethyl tert-butyl ether	< 1.00	U	µg/l	1.00						
Di-isopropyl ether	< 1.00	U	µg/l	1.00						
Tert-Butanol / butyl alcohol	< 10.0	U	µg/l	10.0						
1,4-Dioxane	< 20.0	U	µg/l	20.0						
trans-1,4-Dichloro-2-butene	< 5.00	U	µg/l	5.00						
Ethanol	< 200	U	µg/l	200						
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
Surrogate: 4-Bromofluorobenzene	49.0		µg/l		50.0		98	70-130		
Surrogate: Toluene-d8	49.9		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	54.0		µg/l		50.0		108	70-130		
Surrogate: Dibromofluoromethane	48.5		µg/l		50.0		97	70-130		
Blank (1711409-BLK2)					Prepared & Analyzed: 06-Jul-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00	U, D	µg/l	5.00						
Acetone	10.9	J, D	µg/l	50.0						
Acrylonitrile	< 2.50	U, D	µg/l	2.50						
Benzene	< 5.00	U, D	µg/l	5.00						
Bromobenzene	< 5.00	U, D	µg/l	5.00						
Bromochloromethane	< 5.00	U, D	µg/l	5.00						
Bromodichloromethane	< 2.50	U, D	µg/l	2.50						
Bromoform	< 5.00	U, D	µg/l	5.00						
Bromomethane	< 10.0	U, D	µg/l	10.0						
2-Butanone (MEK)	< 10.0	U, D	µg/l	10.0						
n-Butylbenzene	< 5.00	U, D	µg/l	5.00						
sec-Butylbenzene	< 5.00	U, D	µg/l	5.00						
tert-Butylbenzene	< 5.00	U, D	µg/l	5.00						
Carbon disulfide	< 10.0	U, D	µg/l	10.0						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1711409 - SW846 5030 Water MS										
<u>Blank (1711409-BLK2)</u>	<u>Prepared & Analyzed: 06-Jul-17</u>									
Carbon tetrachloride	< 5.00	U, D	µg/l	5.00						
Chlorobenzene	< 5.00	U, D	µg/l	5.00						
Chloroethane	< 10.0	U, D	µg/l	10.0						
Chloroform	< 5.00	U, D	µg/l	5.00						
Chloromethane	< 10.0	U, D	µg/l	10.0						
2-Chlorotoluene	< 5.00	U, D	µg/l	5.00						
4-Chlorotoluene	< 5.00	U, D	µg/l	5.00						
1,2-Dibromo-3-chloropropane	< 10.0	U, D	µg/l	10.0						
Dibromochloromethane	< 2.50	U, D	µg/l	2.50						
1,2-Dibromoethane (EDB)	< 2.50	U, D	µg/l	2.50						
Dibromomethane	< 5.00	U, D	µg/l	5.00						
1,2-Dichlorobenzene	< 5.00	U, D	µg/l	5.00						
1,3-Dichlorobenzene	< 5.00	U, D	µg/l	5.00						
1,4-Dichlorobenzene	< 5.00	U, D	µg/l	5.00						
Dichlorodifluoromethane (Freon12)	< 10.0	U, D	µg/l	10.0						
1,1-Dichloroethane	< 5.00	U, D	µg/l	5.00						
1,2-Dichloroethane	< 5.00	U, D	µg/l	5.00						
1,1-Dichloroethene	< 5.00	U, D	µg/l	5.00						
cis-1,2-Dichloroethene	< 5.00	U, D	µg/l	5.00						
trans-1,2-Dichloroethene	< 5.00	U, D	µg/l	5.00						
1,2-Dichloropropane	< 5.00	U, D	µg/l	5.00						
1,3-Dichloropropane	< 5.00	U, D	µg/l	5.00						
2,2-Dichloropropane	< 5.00	U, D	µg/l	5.00						
1,1-Dichloropropene	< 5.00	U, D	µg/l	5.00						
cis-1,3-Dichloropropene	< 2.50	U, D	µg/l	2.50						
trans-1,3-Dichloropropene	< 2.50	U, D	µg/l	2.50						
Ethylbenzene	< 5.00	U, D	µg/l	5.00						
Hexachlorobutadiene	6.30	D	µg/l	2.50						
2-Hexanone (MBK)	< 10.0	U, D	µg/l	10.0						
Isopropylbenzene	< 5.00	U, D	µg/l	5.00						
4-Isopropyltoluene	< 5.00	U, D	µg/l	5.00						
Methyl tert-butyl ether	< 5.00	U, D	µg/l	5.00						
4-Methyl-2-pentanone (MIBK)	< 10.0	U, D	µg/l	10.0						
Methylene chloride	7.85	J, D	µg/l	10.0						
Naphthalene	6.80	D	µg/l	5.00						
n-Propylbenzene	< 5.00	U, D	µg/l	5.00						
Styrene	< 5.00	U, D	µg/l	5.00						
1,1,1,2-Tetrachloroethane	< 5.00	U, D	µg/l	5.00						
1,1,2,2-Tetrachloroethane	< 2.50	U, D	µg/l	2.50						
Tetrachloroethene	< 5.00	U, D	µg/l	5.00						
Toluene	< 5.00	U, D	µg/l	5.00						
1,2,3-Trichlorobenzene	5.10	D	µg/l	5.00						
1,2,4-Trichlorobenzene	5.05	D	µg/l	5.00						
1,3,5-Trichlorobenzene	< 5.00	U, D	µg/l	5.00						
1,1,1-Trichloroethane	< 5.00	U, D	µg/l	5.00						
1,1,2-Trichloroethane	< 5.00	U, D	µg/l	5.00						
Trichloroethene	< 5.00	U, D	µg/l	5.00						
Trichlorofluoromethane (Freon 11)	< 5.00	U, D	µg/l	5.00						
1,2,3-Trichloropropane	< 5.00	U, D	µg/l	5.00						
1,2,4-Trimethylbenzene	< 5.00	U, D	µg/l	5.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
Blank (1711409-BLK2)					<u>Prepared & Analyzed: 06-Jul-17</u>					
1,3,5-Trimethylbenzene	< 5.00	U, D	µg/l	5.00						
Vinyl chloride	< 5.00	U, D	µg/l	5.00						
m,p-Xylene	< 10.0	U, D	µg/l	10.0						
o-Xylene	< 5.00	U, D	µg/l	5.00						
Tetrahydrofuran	< 10.0	U, D	µg/l	10.0						
Ethyl ether	< 5.00	U, D	µg/l	5.00						
Tert-amyl methyl ether	< 5.00	U, D	µg/l	5.00						
Ethyl tert-butyl ether	< 5.00	U, D	µg/l	5.00						
Di-isopropyl ether	< 5.00	U, D	µg/l	5.00						
Tert-Butanol / butyl alcohol	< 50.0	U, D	µg/l	50.0						
1,4-Dioxane	< 100	U, D	µg/l	100						
trans-1,4-Dichloro-2-butene	< 25.0	U, D	µg/l	25.0						
Ethanol	< 1000	U, D	µg/l	1000						
Total Xylenes	< 5.00	U, D	µg/l	5.00						
Cyclohexane	< 25.0	U, D	µg/l	25.0						
Methyl acetate	33.2	D	µg/l	25.0						
Methylcyclohexane	< 25.0	U, D	µg/l	25.0						
<i>Surrogate: 4-Bromofluorobenzene</i>	41.2		µg/l		50.0		82	70-130		
<i>Surrogate: Toluene-d8</i>	46.6		µg/l		50.0		93	70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	42.9		µg/l		50.0		86	70-130		
<i>Surrogate: Dibromofluoromethane</i>	38.3		µg/l		50.0		77	70-130		
LCS (1711409-BS1)					<u>Prepared & Analyzed: 06-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.7		µg/l		20.0		109	70-130		
Acetone	16.8		µg/l		20.0		84	70-130		
Acrylonitrile	17.0		µg/l		20.0		85	70-130		
Benzene	22.6		µg/l		20.0		113	70-130		
Bromobenzene	25.4		µg/l		20.0		127	70-130		
Bromochloromethane	19.4		µg/l		20.0		97	70-130		
Bromodichloromethane	23.6		µg/l		20.0		118	70-130		
Bromoform	24.3	B	µg/l		20.0		122	70-130		
Bromomethane	16.1		µg/l		20.0		80	70-130		
2-Butanone (MEK)	18.2		µg/l		20.0		91	70-130		
n-Butylbenzene	19.4		µg/l		20.0		97	70-130		
sec-Butylbenzene	24.9		µg/l		20.0		125	70-130		
tert-Butylbenzene	24.2		µg/l		20.0		121	70-130		
Carbon disulfide	20.6		µg/l		20.0		103	70-130		
Carbon tetrachloride	24.4		µg/l		20.0		122	70-130		
Chlorobenzene	22.7		µg/l		20.0		113	70-130		
Chloroethane	19.2		µg/l		20.0		96	70-130		
Chloroform	19.5		µg/l		20.0		98	70-130		
Chloromethane	23.8		µg/l		20.0		119	70-130		
2-Chlorotoluene	23.1		µg/l		20.0		116	70-130		
4-Chlorotoluene	23.7		µg/l		20.0		118	70-130		
1,2-Dibromo-3-chloropropane	20.1		µg/l		20.0		101	70-130		
Dibromochloromethane	22.7		µg/l		20.0		113	70-130		
1,2-Dibromoethane (EDB)	23.2		µg/l		20.0		116	70-130		
Dibromomethane	22.3		µg/l		20.0		112	70-130		
1,2-Dichlorobenzene	22.4		µg/l		20.0		112	70-130		
1,3-Dichlorobenzene	27.9	QM9	µg/l		20.0		139	70-130		
1,4-Dichlorobenzene	20.9		µg/l		20.0		105	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
LCS (1711409-BS1)					Prepared & Analyzed: 06-Jul-17					
Dichlorodifluoromethane (Freon12)	27.5		µg/l		20.0		137	70-130		
1,1-Dichloroethane	19.8		µg/l		20.0		99	70-130		
1,2-Dichloroethane	21.8		µg/l		20.0		109	70-130		
1,1-Dichloroethene	20.4		µg/l		20.0		102	70-130		
cis-1,2-Dichloroethene	19.9		µg/l		20.0		100	70-130		
trans-1,2-Dichloroethene	19.5		µg/l		20.0		98	70-130		
1,2-Dichloropropane	21.1		µg/l		20.0		106	70-130		
1,3-Dichloropropane	21.4		µg/l		20.0		107	70-130		
2,2-Dichloropropane	19.4		µg/l		20.0		97	70-130		
1,1-Dichloropropene	20.4		µg/l		20.0		102	70-130		
cis-1,3-Dichloropropene	18.0		µg/l		20.0		90	70-130		
trans-1,3-Dichloropropene	18.5		µg/l		20.0		93	70-130		
Ethylbenzene	22.0		µg/l		20.0		110	70-130		
Hexachlorobutadiene	22.5	B	µg/l		20.0		112	70-130		
2-Hexanone (MBK)	18.9		µg/l		20.0		95	70-130		
Isopropylbenzene	25.0		µg/l		20.0		125	70-130		
4-Isopropyltoluene	20.6		µg/l		20.0		103	70-130		
Methyl tert-butyl ether	18.9		µg/l		20.0		94	70-130		
4-Methyl-2-pentanone (MIBK)	19.0		µg/l		20.0		95	70-130		
Methylene chloride	18.7		µg/l		20.0		93	70-130		
Naphthalene	19.1	B	µg/l		20.0		95	70-130		
n-Propylbenzene	23.7		µg/l		20.0		119	70-130		
Styrene	21.7		µg/l		20.0		109	70-130		
1,1,1,2-Tetrachloroethane	24.1		µg/l		20.0		121	70-130		
1,1,2,2-Tetrachloroethane	24.3		µg/l		20.0		121	70-130		
Tetrachloroethene	24.4		µg/l		20.0		122	70-130		
Toluene	23.0		µg/l		20.0		115	70-130		
1,2,3-Trichlorobenzene	21.3	B	µg/l		20.0		106	70-130		
1,2,4-Trichlorobenzene	20.0	B	µg/l		20.0		100	70-130		
1,3,5-Trichlorobenzene	20.2		µg/l		20.0		101	70-130		
1,1,1-Trichloroethane	22.5		µg/l		20.0		113	70-130		
1,1,2-Trichloroethane	22.6		µg/l		20.0		113	70-130		
Trichloroethene	22.4		µg/l		20.0		112	70-130		
Trichlorofluoromethane (Freon 11)	22.4		µg/l		20.0		112	70-130		
1,2,3-Trichloropropane	23.6		µg/l		20.0		118	70-130		
1,2,4-Trimethylbenzene	23.9		µg/l		20.0		119	70-130		
1,3,5-Trimethylbenzene	22.7		µg/l		20.0		114	70-130		
Vinyl chloride	24.0		µg/l		20.0		120	70-130		
m,p-Xylene	21.8		µg/l		20.0		109	70-130		
o-Xylene	23.0		µg/l		20.0		115	70-130		
Tetrahydrofuran	14.0		µg/l		20.0		70	70-130		
Ethyl ether	18.4		µg/l		20.0		92	70-130		
Tert-amyl methyl ether	22.7		µg/l		20.0		113	70-130		
Ethyl tert-butyl ether	16.2		µg/l		20.0		81	70-130		
Di-isopropyl ether	16.5		µg/l		20.0		83	70-130		
Tert-Butanol / butyl alcohol	175		µg/l		200		88	70-130		
1,4-Dioxane	218		µg/l		200		109	70-130		
trans-1,4-Dichloro-2-butene	21.6		µg/l		20.0		108	70-130		
Ethanol	328		µg/l		400		82	70-130		
Cyclohexane	22.8		µg/l		20.0		114	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
LCS (1711409-BS1)					Prepared & Analyzed: 06-Jul-17					
Methyl acetate	13.2	B	µg/l		20.0		66	70-130		
Methylcyclohexane	22.9		µg/l		20.0		115	70-130		
Surrogate: 4-Bromofluorobenzene	55.6		µg/l		50.0		111	70-130		
Surrogate: Toluene-d8	52.5		µg/l		50.0		105	70-130		
Surrogate: 1,2-Dichloroethane-d4	51.4		µg/l		50.0		103	70-130		
Surrogate: Dibromofluoromethane	50.9		µg/l		50.0		102	70-130		
LCS (1711409-BS2)					Prepared & Analyzed: 06-Jul-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	18.4	D	µg/l		20.0		92	70-130		
Acetone	14.6	D	µg/l		20.0		73	70-130		
Acrylonitrile	14.4	D	µg/l		20.0		72	70-130		
Benzene	25.4	D	µg/l		20.0		127	70-130		
Bromobenzene	27.2	D	µg/l		20.0		136	70-130		
Bromochloromethane	19.8	D	µg/l		20.0		99	70-130		
Bromodichloromethane	22.2	D	µg/l		20.0		111	70-130		
Bromoform	25.2	D, B	µg/l		20.0		126	70-130		
Bromomethane	14.7	D	µg/l		20.0		73	70-130		
2-Butanone (MEK)	17.2	D	µg/l		20.0		86	70-130		
n-Butylbenzene	22.7	D	µg/l		20.0		113	70-130		
sec-Butylbenzene	26.0	D	µg/l		20.0		130	70-130		
tert-Butylbenzene	24.9	D	µg/l		20.0		124	70-130		
Carbon disulfide	18.5	D	µg/l		20.0		93	70-130		
Carbon tetrachloride	22.2	D	µg/l		20.0		111	70-130		
Chlorobenzene	24.5	D	µg/l		20.0		123	70-130		
Chloroethane	17.1	D	µg/l		20.0		85	70-130		
Chloroform	22.1	D	µg/l		20.0		111	70-130		
Chloromethane	21.1	D	µg/l		20.0		105	70-130		
2-Chlorotoluene	24.4	D	µg/l		20.0		122	70-130		
4-Chlorotoluene	26.0	D	µg/l		20.0		130	70-130		
1,2-Dibromo-3-chloropropane	21.4	D	µg/l		20.0		107	70-130		
Dibromochloromethane	21.1	D	µg/l		20.0		106	70-130		
1,2-Dibromoethane (EDB)	20.6	D	µg/l		20.0		103	70-130		
Dibromomethane	20.8	D	µg/l		20.0		104	70-130		
1,2-Dichlorobenzene	24.2	D	µg/l		20.0		121	70-130		
1,3-Dichlorobenzene	30.1	D	µg/l		20.0		150	70-130		
1,4-Dichlorobenzene	23.0	D	µg/l		20.0		115	70-130		
Dichlorodifluoromethane (Freon12)	19.6	D	µg/l		20.0		98	70-130		
1,1-Dichloroethane	18.3	D	µg/l		20.0		91	70-130		
1,2-Dichloroethane	21.6	D	µg/l		20.0		108	70-130		
1,1-Dichloroethene	17.6	D	µg/l		20.0		88	70-130		
cis-1,2-Dichloroethene	19.6	D	µg/l		20.0		98	70-130		
trans-1,2-Dichloroethene	18.9	D	µg/l		20.0		94	70-130		
1,2-Dichloropropane	19.9	D	µg/l		20.0		99	70-130		
1,3-Dichloropropane	19.6	D	µg/l		20.0		98	70-130		
2,2-Dichloropropane	20.6	D	µg/l		20.0		103	70-130		
1,1-Dichloropropene	20.2	D	µg/l		20.0		101	70-130		
cis-1,3-Dichloropropene	17.9	D	µg/l		20.0		89	70-130		
trans-1,3-Dichloropropene	18.0	D	µg/l		20.0		90	70-130		
Ethylbenzene	23.2	D	µg/l		20.0		116	70-130		
Hexachlorobutadiene	25.7	D, B	µg/l		20.0		129	70-130		
2-Hexanone (MBK)	17.4	D	µg/l		20.0		87	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
LCS (1711409-BS2)					Prepared & Analyzed: 06-Jul-17					
Isopropylbenzene	26.7	D	µg/l		20.0		134	70-130		
4-Isopropyltoluene	22.2	D	µg/l		20.0		111	70-130		
Methyl tert-butyl ether	16.9	D	µg/l		20.0		85	70-130		
4-Methyl-2-pentanone (MIBK)	18.3	D	µg/l		20.0		92	70-130		
Methylene chloride	17.7	D	µg/l		20.0		89	70-130		
Naphthalene	19.5	D, B	µg/l		20.0		98	70-130		
n-Propylbenzene	25.3	D	µg/l		20.0		127	70-130		
Styrene	23.8	D	µg/l		20.0		119	70-130		
1,1,1,2-Tetrachloroethane	26.4	D	µg/l		20.0		132	70-130		
1,1,2,2-Tetrachloroethane	24.2	D	µg/l		20.0		121	70-130		
Tetrachloroethene	22.6	D	µg/l		20.0		113	70-130		
Toluene	20.8	D	µg/l		20.0		104	70-130		
1,2,3-Trichlorobenzene	22.9	D, B	µg/l		20.0		115	70-130		
1,2,4-Trichlorobenzene	22.4	D, B	µg/l		20.0		112	70-130		
1,3,5-Trichlorobenzene	23.5	D	µg/l		20.0		117	70-130		
1,1,1-Trichloroethane	21.6	D	µg/l		20.0		108	70-130		
1,1,2-Trichloroethane	20.4	D	µg/l		20.0		102	70-130		
Trichloroethene	21.0	D	µg/l		20.0		105	70-130		
Trichlorofluoromethane (Freon 11)	18.6	D	µg/l		20.0		93	70-130		
1,2,3-Trichloropropane	23.6	D	µg/l		20.0		118	70-130		
1,2,4-Trimethylbenzene	26.0	D	µg/l		20.0		130	70-130		
1,3,5-Trimethylbenzene	24.7	D	µg/l		20.0		123	70-130		
Vinyl chloride	19.3	D	µg/l		20.0		96	70-130		
m,p-Xylene	23.6	D	µg/l		20.0		118	70-130		
o-Xylene	24.7	D	µg/l		20.0		123	70-130		
Tetrahydrofuran	17.4	D	µg/l		20.0		87	70-130		
Ethyl ether	16.9	D	µg/l		20.0		85	70-130		
Tert-amyl methyl ether	21.6	D	µg/l		20.0		108	70-130		
Ethyl tert-butyl ether	17.0	D	µg/l		20.0		85	70-130		
Di-isopropyl ether	16.3	D	µg/l		20.0		81	70-130		
Tert-Butanol / butyl alcohol	141	D	µg/l		200		70	70-130		
1,4-Dioxane	164	D	µg/l		200		82	70-130		
trans-1,4-Dichloro-2-butene	23.5	D	µg/l		20.0		118	70-130		
Ethanol	277	D	µg/l		400		69	70-130		
Cyclohexane	22.1	D	µg/l		20.0		111	70-130		
Methyl acetate	22.4	D, B	µg/l		20.0		112	70-130		
Methylcyclohexane	20.1	D	µg/l		20.0		100	70-130		
Surrogate: 4-Bromofluorobenzene	55.6		µg/l		50.0		111	70-130		
Surrogate: Toluene-d8	44.4		µg/l		50.0		89	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.7		µg/l		50.0		93	70-130		
Surrogate: Dibromofluoromethane	50.0		µg/l		50.0		100	70-130		
LCS Dup (1711409-BSD1)					Prepared & Analyzed: 06-Jul-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	19.3		µg/l		20.0		97	70-130	12	20
Acetone	17.6		µg/l		20.0		88	70-130	4	20
Acrylonitrile	16.2		µg/l		20.0		81	70-130	5	20
Benzene	21.5		µg/l		20.0		108	70-130	5	20
Bromobenzene	22.6		µg/l		20.0		113	70-130	11	20
Bromochloromethane	18.7		µg/l		20.0		93	70-130	4	20
Bromodichloromethane	22.6		µg/l		20.0		113	70-130	4	20
Bromoform	22.5	B	µg/l		20.0		112	70-130	8	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
LCS Dup (1711409-BSD1)					Prepared & Analyzed: 06-Jul-17					
Bromomethane	15.4		µg/l		20.0		77	70-130	4	20
2-Butanone (MEK)	18.0		µg/l		20.0		90	70-130	1	20
n-Butylbenzene	16.5		µg/l		20.0		82	70-130	16	20
sec-Butylbenzene	20.3		µg/l		20.0		102	70-130	20	20
tert-Butylbenzene	20.1		µg/l		20.0		100	70-130	18	20
Carbon disulfide	18.7		µg/l		20.0		94	70-130	9	20
Carbon tetrachloride	21.9		µg/l		20.0		109	70-130	11	20
Chlorobenzene	20.6		µg/l		20.0		103	70-130	9	20
Chloroethane	18.0		µg/l		20.0		90	70-130	6	20
Chloroform	18.2		µg/l		20.0		91	70-130	7	20
Chloromethane	22.2		µg/l		20.0		111	70-130	7	20
2-Chlorotoluene	19.9		µg/l		20.0		100	70-130	15	20
4-Chlorotoluene	20.5		µg/l		20.0		102	70-130	15	20
1,2-Dibromo-3-chloropropane	19.2		µg/l		20.0		96	70-130	5	20
Dibromochloromethane	21.4		µg/l		20.0		107	70-130	6	20
1,2-Dibromoethane (EDB)	22.2		µg/l		20.0		111	70-130	4	20
Dibromomethane	22.1		µg/l		20.0		110	70-130	1	20
1,2-Dichlorobenzene	20.2		µg/l		20.0		101	70-130	11	20
1,3-Dichlorobenzene	23.9		µg/l		20.0		119	70-130	15	20
1,4-Dichlorobenzene	18.9		µg/l		20.0		94	70-130	10	20
Dichlorodifluoromethane (Freon12)	24.3		µg/l		20.0		121	70-130	12	20
1,1-Dichloroethane	18.6		µg/l		20.0		93	70-130	6	20
1,2-Dichloroethane	21.4		µg/l		20.0		107	70-130	2	20
1,1-Dichloroethene	19.1		µg/l		20.0		95	70-130	7	20
cis-1,2-Dichloroethene	18.6		µg/l		20.0		93	70-130	7	20
trans-1,2-Dichloroethene	17.6		µg/l		20.0		88	70-130	10	20
1,2-Dichloropropane	20.2		µg/l		20.0		101	70-130	4	20
1,3-Dichloropropane	20.8		µg/l		20.0		104	70-130	3	20
2,2-Dichloropropane	17.7		µg/l		20.0		89	70-130	9	20
1,1-Dichloropropene	18.5		µg/l		20.0		92	70-130	10	20
cis-1,3-Dichloropropene	17.5		µg/l		20.0		87	70-130	3	20
trans-1,3-Dichloropropene	17.3		µg/l		20.0		87	70-130	7	20
Ethylbenzene	18.8		µg/l		20.0		94	70-130	15	20
Hexachlorobutadiene	19.1	B	µg/l		20.0		96	70-130	16	20
2-Hexanone (MBK)	19.7		µg/l		20.0		98	70-130	4	20
Isopropylbenzene	21.7		µg/l		20.0		108	70-130	14	20
4-Isopropyltoluene	17.4		µg/l		20.0		87	70-130	17	20
Methyl tert-butyl ether	18.8		µg/l		20.0		94	70-130	0.6	20
4-Methyl-2-pentanone (MIBK)	18.9		µg/l		20.0		94	70-130	0.9	20
Methylene chloride	18.4		µg/l		20.0		92	70-130	2	20
Naphthalene	17.6	B	µg/l		20.0		88	70-130	8	20
n-Propylbenzene	20.0		µg/l		20.0		100	70-130	17	20
Styrene	19.2		µg/l		20.0		96	70-130	12	20
1,1,1,2-Tetrachloroethane	21.4		µg/l		20.0		107	70-130	12	20
1,1,2,2-Tetrachloroethane	22.9		µg/l		20.0		115	70-130	6	20
Tetrachloroethene	22.2		µg/l		20.0		111	70-130	9	20
Toluene	21.0		µg/l		20.0		105	70-130	9	20
1,2,3-Trichlorobenzene	18.7	B	µg/l		20.0		93	70-130	13	20
1,2,4-Trichlorobenzene	17.6	B	µg/l		20.0		88	70-130	12	20
1,3,5-Trichlorobenzene	17.5		µg/l		20.0		87	70-130	15	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
LCS Dup (1711409-BSD1)					<u>Prepared & Analyzed: 06-Jul-17</u>					
1,1,1-Trichloroethane	20.8		µg/l		20.0		104	70-130	8	20
1,1,2-Trichloroethane	22.1		µg/l		20.0		110	70-130	2	20
Trichloroethene	20.6		µg/l		20.0		103	70-130	8	20
Trichlorofluoromethane (Freon 11)	20.5		µg/l		20.0		102	70-130	9	20
1,2,3-Trichloropropane	22.2		µg/l		20.0		111	70-130	6	20
1,2,4-Trimethylbenzene	20.5		µg/l		20.0		103	70-130	15	20
1,3,5-Trimethylbenzene	19.5		µg/l		20.0		97	70-130	15	20
Vinyl chloride	22.5		µg/l		20.0		112	70-130	7	20
m,p-Xylene	19.3		µg/l		20.0		96	70-130	12	20
o-Xylene	20.7		µg/l		20.0		103	70-130	11	20
Tetrahydrofuran	19.3	QR2	µg/l		20.0		97	70-130	32	20
Ethyl ether	19.4		µg/l		20.0		97	70-130	5	20
Tert-amyl methyl ether	22.2		µg/l		20.0		111	70-130	2	20
Ethyl tert-butyl ether	14.9		µg/l		20.0		74	70-130	9	20
Di-isopropyl ether	16.2		µg/l		20.0		81	70-130	2	20
Tert-Butanol / butyl alcohol	178		µg/l		200		89	70-130	1	20
1,4-Dioxane	204		µg/l		200		102	70-130	6	20
trans-1,4-Dichloro-2-butene	19.5		µg/l		20.0		98	70-130	10	20
Ethanol	322		µg/l		400		80	70-130	2	20
Cyclohexane	19.2		µg/l		20.0		96	70-130	17	30
Methyl acetate	13.2	B	µg/l		20.0		66	70-130	0.08	30
Methylcyclohexane	18.6		µg/l		20.0		93	70-130	21	30
Surrogate: 4-Bromofluorobenzene	54.6		µg/l		50.0		109	70-130		
Surrogate: Toluene-d8	51.6		µg/l		50.0		103	70-130		
Surrogate: 1,2-Dichloroethane-d4	51.0		µg/l		50.0		102	70-130		
Surrogate: Dibromofluoromethane	45.1		µg/l		50.0		90	70-130		
LCS Dup (1711409-BSD2)					<u>Prepared & Analyzed: 06-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	18.0	D	µg/l		20.0		90	70-130	2	20
Acetone	16.2	D	µg/l		20.0		81	70-130	10	20
Acrylonitrile	16.6	D	µg/l		20.0		83	70-130	14	20
Benzene	21.8	D	µg/l		20.0		109	70-130	15	20
Bromobenzene	23.6	D	µg/l		20.0		118	70-130	14	20
Bromochloromethane	22.8	D	µg/l		20.0		114	70-130	14	20
Bromodichloromethane	23.8	D	µg/l		20.0		119	70-130	7	20
Bromoform	24.7	D, B	µg/l		20.0		124	70-130	2	20
Bromomethane	14.1	D	µg/l		20.0		70	70-130	4	20
2-Butanone (MEK)	21.2	D	µg/l		20.0		106	70-130	21	20
n-Butylbenzene	18.6	D	µg/l		20.0		93	70-130	20	20
sec-Butylbenzene	20.6	D	µg/l		20.0		103	70-130	24	20
tert-Butylbenzene	20.6	D	µg/l		20.0		103	70-130	19	20
Carbon disulfide	17.6	D	µg/l		20.0		88	70-130	5	20
Carbon tetrachloride	22.8	D	µg/l		20.0		114	70-130	3	20
Chlorobenzene	21.7	D	µg/l		20.0		108	70-130	12	20
Chloroethane	17.4	D	µg/l		20.0		87	70-130	2	20
Chloroform	20.5	D	µg/l		20.0		103	70-130	8	20
Chloromethane	22.8	D	µg/l		20.0		114	70-130	8	20
2-Chlorotoluene	20.8	D	µg/l		20.0		104	70-130	16	20
4-Chlorotoluene	22.0	D	µg/l		20.0		110	70-130	16	20
1,2-Dibromo-3-chloropropane	21.1	D	µg/l		20.0		105	70-130	1	20
Dibromochloromethane	22.3	D	µg/l		20.0		112	70-130	6	20

This laboratory report is not valid without an authorized signature on the cover page.

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
LCS Dup (1711409-BSD2)					Prepared & Analyzed: 06-Jul-17					
1,2-Dibromoethane (EDB)	21.8	D	µg/l		20.0		109	70-130	6	20
Dibromomethane	22.1	D	µg/l		20.0		110	70-130	6	20
1,2-Dichlorobenzene	21.3	D	µg/l		20.0		106	70-130	13	20
1,3-Dichlorobenzene	25.5	D	µg/l		20.0		128	70-130	16	20
1,4-Dichlorobenzene	19.9	D	µg/l		20.0		100	70-130	14	20
Dichlorodifluoromethane (Freon12)	21.2	D	µg/l		20.0		106	70-130	8	20
1,1-Dichloroethane	18.6	D	µg/l		20.0		93	70-130	2	20
1,2-Dichloroethane	21.0	D	µg/l		20.0		105	70-130	3	20
1,1-Dichloroethene	17.8	D	µg/l		20.0		89	70-130	1	20
cis-1,2-Dichloroethene	20.3	D	µg/l		20.0		101	70-130	3	20
trans-1,2-Dichloroethene	17.9	D	µg/l		20.0		90	70-130	5	20
1,2-Dichloropropane	20.2	D	µg/l		20.0		101	70-130	2	20
1,3-Dichloropropane	20.6	D	µg/l		20.0		103	70-130	5	20
2,2-Dichloropropane	22.1	D	µg/l		20.0		111	70-130	7	20
1,1-Dichloropropene	19.0	D	µg/l		20.0		95	70-130	6	20
cis-1,3-Dichloropropene	19.8	D	µg/l		20.0		99	70-130	11	20
trans-1,3-Dichloropropene	19.9	D	µg/l		20.0		99	70-130	10	20
Ethylbenzene	19.8	D	µg/l		20.0		99	70-130	16	20
Hexachlorobutadiene	21.1	D, B	µg/l		20.0		106	70-130	20	20
2-Hexanone (MBK)	20.7	D	µg/l		20.0		103	70-130	17	20
Isopropylbenzene	22.6	D	µg/l		20.0		113	70-130	17	20
4-Isopropyltoluene	18.9	D	µg/l		20.0		94	70-130	16	20
Methyl tert-butyl ether	18.6	D	µg/l		20.0		93	70-130	10	20
4-Methyl-2-pentanone (MIBK)	21.0	D	µg/l		20.0		105	70-130	14	20
Methylene chloride	18.7	D	µg/l		20.0		93	70-130	5	20
Naphthalene	19.3	D, B	µg/l		20.0		97	70-130	1	20
n-Propylbenzene	21.5	D	µg/l		20.0		108	70-130	16	20
Styrene	20.7	D	µg/l		20.0		104	70-130	14	20
1,1,1,2-Tetrachloroethane	24.4	D	µg/l		20.0		122	70-130	8	20
1,1,2,2-Tetrachloroethane	23.1	D	µg/l		20.0		116	70-130	5	20
Tetrachloroethene	21.9	D	µg/l		20.0		110	70-130	3	20
Toluene	20.4	D	µg/l		20.0		102	70-130	2	20
1,2,3-Trichlorobenzene	21.0	D, B	µg/l		20.0		105	70-130	9	20
1,2,4-Trichlorobenzene	19.8	D, B	µg/l		20.0		99	70-130	12	20
1,3,5-Trichlorobenzene	20.4	D	µg/l		20.0		102	70-130	14	20
1,1,1-Trichloroethane	21.8	D	µg/l		20.0		109	70-130	0.9	20
1,1,2-Trichloroethane	21.2	D	µg/l		20.0		106	70-130	4	20
Trichloroethene	20.3	D	µg/l		20.0		102	70-130	3	20
Trichlorofluoromethane (Freon 11)	18.6	D	µg/l		20.0		93	70-130	0.05	20
1,2,3-Trichloropropane	22.4	D	µg/l		20.0		112	70-130	5	20
1,2,4-Trimethylbenzene	21.8	D	µg/l		20.0		109	70-130	17	20
1,3,5-Trimethylbenzene	21.1	D	µg/l		20.0		105	70-130	16	20
Vinyl chloride	17.5	D	µg/l		20.0		88	70-130	10	20
m,p-Xylene	20.6	D	µg/l		20.0		103	70-130	13	20
o-Xylene	21.5	D	µg/l		20.0		107	70-130	14	20
Tetrahydrofuran	19.8	D	µg/l		20.0		99	70-130	13	20
Ethyl ether	19.2	D	µg/l		20.0		96	70-130	12	20
Tert-amyl methyl ether	20.8	D	µg/l		20.0		104	70-130	4	20
Ethyl tert-butyl ether	18.6	D	µg/l		20.0		93	70-130	9	20
Di-isopropyl ether	17.6	D	µg/l		20.0		88	70-130	8	20

This laboratory report is not valid without an authorized signature on the cover page.

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711409 - SW846 5030 Water MS										
LCS Dup (1711409-BSD2)					Prepared & Analyzed: 06-Jul-17					
Tert-Butanol / butyl alcohol	180	D	µg/l		200		90	70-130	25	20
1,4-Dioxane	200	D	µg/l		200		100	70-130	19	20
trans-1,4-Dichloro-2-butene	22.3	D	µg/l		20.0		112	70-130	5	20
Ethanol	307	D	µg/l		400		77	70-130	10	20
Cyclohexane	17.8	D	µg/l		20.0		89	70-130	22	30
Methyl acetate	26.1	D, B	µg/l		20.0		131	70-130	15	30
Methylcyclohexane	17.8	D	µg/l		20.0		89	70-130	12	30
Surrogate: 4-Bromofluorobenzene	54.7		µg/l		50.0		109	70-130		
Surrogate: Toluene-d8	49.5		µg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	48.4		µg/l		50.0		97	70-130		
Surrogate: Dibromofluoromethane	50.1		µg/l		50.0		100	70-130		

Notes and Definitions

B	Analyte is found in the associated blank as well as in the sample (CLP B-flag).
D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QB2	The method blank contains analyte at a concentration above the MRL, however no reportable concentration is present in the sample.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

ORIGIN ID:DKKA (716) 662-4157
DHARMA IYER
IYER ENVIRONMENTAL GROUP PLLC
44 ROLLING HILLS DR

ORCHARD PARK, NY 14127
UNITED STATES US

SHIP DATE: 29 JUN 17
ACT: 1286294/NET 3850
CAD: 1286294/NET 3850
DIMS: 10x12x14 IN

BILL RECIPIENT

TO **AGNUS HUNTLEY - SAMPLE RECEIPT**
EUROFINS SPECTRUM ANALYTICAL
11 ALGREN DRIVE

AGAWAM MA 01001

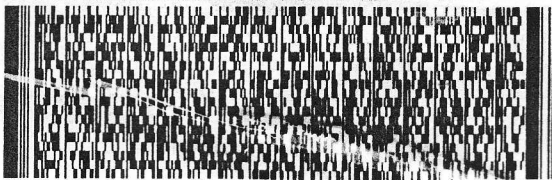
(413) 789-9018

REF: MR. C'S

INV:

PO:

DEPT:



546J11/50263C1

Label can

FedEx Ship Manager - Print Your Label(s)

FRI - 30 JUN 3:00P

STANDARD OVERNIGHT

TRK#
0201

7795 2677 8551

EB EHTA

01001

MA-US

BDL



After printing this label

6/29/2017

AT	T	Analyte	MDL	PQL
A	Y	1,1,1-Trichloroethane	0.5	1
A	Y	1,1,2,2-Tetrachloroethane	0.42	1
A	Y	1,1,2-Trichloro-1,2,2-trifluoroethane	0.82	1
A	Y	1,1,2-Trichloroethane	0.38	1
A	Y	1,1-Dichloroethane	0.25	1
A	Y	1,1-Dichloroethene	0.39	1
A	Y	1,2,4-Trichlorobenzene	0.26	1
A	Y	1,2-Dibromo-3-chloropropane	0.75	1
A	Y	1,2-Dibromoethane	0.5	1
A	Y	1,2-Dichlorobenzene	0.33	1
A	Y	1,2-Dichloroethane	0.41	1
A	Y	1,2-Dichloropropane	0.61	1
A	Y	1,3-Dichlorobenzene	0.29	1
A	Y	1,4-Dichlorobenzene	0.4	1
A	Y	2-Butanone	2.1	5
A	Y	2-Hexanone	1.7	5
A	Y	4-Methyl-2-pentanone	0.82	5
A	Y	Acetone	2.2	5
A	Y	Benzene	0.33	1
A	Y	Bromodichloromethane	0.26	1
A	Y	Bromoform	0.77	1
A	Y	Bromomethane	0.8	1
A	Y	Carbon disulfide	0.34	1
A	Y	Carbon tetrachloride	0.54	1
A	Y	Chlorobenzene	0.26	1
A	Y	Chloroethane	0.48	1
A	Y	Chloroform	0.33	1
A	Y	Chloromethane	0.26	1
A	Y	cis-1,2-Dichloroethene	0.48	1
A	Y	cis-1,3-Dichloropropene	0.45	1
A	Y	Cyclohexane	0.71	1
A	Y	Dibromochloromethane	0.57	1
A	Y	Dichlorodifluoromethane	0.66	1
A	Y	Ethylbenzene	0.35	1
A	Y	Isopropylbenzene	0.38	1
A	Y	Methyl acetate	0.29	1
A	Y	Methyl tert-butyl ether	0.24	1
A	Y	Methylcyclohexane	0.76	1
A	Y	Methylene chloride	0.41	1
A	Y	Styrene	0.5	1
A	Y	Tetrachloroethene	0.65	1
A	Y	Toluene	0.32	1
A	Y	trans-1,2-Dichloroethene	0.65	1
A	Y	trans-1,3-Dichloropropene	0.48	1
A	Y	Trichloroethene	0.36	1
A	Y	Trichlorofluoromethane	0.54	1
A	Y	Vinyl chloride	0.5	1
M	Y	Xylene (Total)	0.36	1

Batch Summary

1711409

Volatile Organic Compounds

1711409-BLK1
1711409-BLK2
1711409-BS1
1711409-BS2
1711409-BSD1
1711409-BSD2
SC36550-01 (PW-4)
SC36550-02 (PW-5)
SC36550-03 (PW-6)
SC36550-04 (PW-7)
SC36550-05 (PW-8)

S705668

Volatile Organic Compounds

S705668-CAL1
S705668-CAL2
S705668-CAL3
S705668-CAL4
S705668-CAL5
S705668-CAL6
S705668-CAL7
S705668-CAL8
S705668-CAL9
S705668-CALA
S705668-CALB
S705668-ICV1
S705668-LCV1
S705668-LCV2
S705668-LCV3
S705668-TUN1

S706028

Volatile Organic Compounds

S706028-CCV1
S706028-TUN1

Report Date:
18-Jul-17 15:43

Laboratory Report SC36816

Ecology and Environment, Inc.
368 Pleasant View Drive
Lancaster, NY 14086
Attn: Mike Steffan

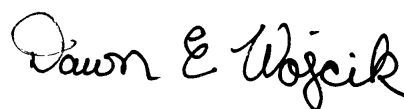
Project: Mr. C's - East Aurora, NY
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393



Authorized by:
Dawn Wojcik
Laboratory Director



Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 32 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis is transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC36816
Project: Mr. C's - East Aurora, NY
Project Number: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC36816-01	PW-4	Ground Water	10-Jul-17 12:00	11-Jul-17 10:40
SC36816-02	PW-5	Ground Water	10-Jul-17 12:30	11-Jul-17 10:40
SC36816-03	PW-6	Ground Water	10-Jul-17 13:00	11-Jul-17 10:40
SC36816-04	PW-7	Ground Water	10-Jul-17 13:30	11-Jul-17 10:40
SC36816-05	PW-8	Ground Water	10-Jul-17 14:00	11-Jul-17 10:40

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 10.5 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Calibration:

1706080

Analyte quantified by quadratic equation type calibration.

1,1,2,2-Tetrachloroethane
1,2,4-Trichlorobenzene
1,2-Dibromo-3-chloropropane
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Bromoform
Carbon tetrachloride
cis-1,3-Dichloropropene
Cyclohexane
Dibromochloromethane
Methylcyclohexane
Styrene
trans-1,3-Dichloropropene

This affected the following samples:

1711925-BLK1
1711925-BS1
1711925-BSD1
1711925-MS1
1711925-MSD1
PW-6
PW-7
PW-8
S705685-ICV1
S706243-CCV1

1707018

Analyte quantified by quadratic equation type calibration.

1,2-Dibromo-3-chloropropane
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
cis-1,3-Dichloropropene
Styrene
trans-1,3-Dichloropropene

SW846 8260C

Calibration:

1707018

This affected the following samples:

1712168-BLK1
1712168-BS1
1712168-BSD1
1712250-BLK1
1712250-BS1
1712250-BS2
1712250-BSD1
1712250-BSD2
PW-4
PW-5
S706141-ICV1
S706324-CCV1
S706380-CCV1

Laboratory Control Samples:

1711925 BS/BSD

1,2-Dibromo-3-chloropropane percent recoveries (69/78) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PW-6
PW-7
PW-8

1712168 BS/BSD

Bromoform percent recoveries (136/131) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-5

Carbon tetrachloride percent recoveries (138/136) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-5

Dibromochloromethane percent recoveries (131/124) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-5

1712250 BS/BSD

Methyl acetate percent recoveries (161/169) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially high bias:

PW-4

Samples:

S706243-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Bromomethane (37.9%)

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

1,2-Dibromo-3-chloropropane (-22.5%)

SW846 8260C

Samples:

S706243-CCV1

This affected the following samples:

1711925-BLK1
1711925-BS1
1711925-BSD1
1711925-MS1
1711925-MSD1
PW-6
PW-7
PW-8

S706324-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,1,1-Trichloroethane (27.1%)
Bromodichloromethane (25.4%)
Bromoform (36.2%)
Carbon tetrachloride (38.3%)
Dibromochloromethane (30.6%)

This affected the following samples:

1712168-BLK1
1712168-BS1
1712168-BSD1
PW-5

SC36816-01RE1 *PW-4*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36816-02 *PW-5*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36816-03 *PW-6*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36816-04 *PW-7*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC36816-05 *PW-8*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Acceptance Check Form

Client: Ecology and Environment, Inc.
Project: Mr. C's - East Aurora, NY / [none]
Work Order: SC36816
Sample(s) received on: 7/11/2017

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	☒	☐	☐
Were custody seals intact?	☒	☐	☐
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	☐	☒	☐
Were samples cooled on ice upon transfer to laboratory representative?	☒	☐	☐
Were sample containers received intact?	☒	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☒	☐	☐
Were samples accompanied by a Chain of Custody document?	☒	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☒	☐	☐
Did sample container labels agree with Chain of Custody document?	☒	☐	☐
Were samples received within method-specific holding times?	☒	☐	☐

Summary of Hits

Lab ID: SC36816-01RE1

Client ID: PW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	82.5	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	2750	D	50.0	µg/l	SW846 8260C
Trichloroethene	207	D	50.0	µg/l	SW846 8260C

Lab ID: SC36816-02

Client ID: PW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	422	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	2620	D	50.0	µg/l	SW846 8260C
Trichloroethene	108	D	50.0	µg/l	SW846 8260C
Vinyl chloride	82.0	D	50.0	µg/l	SW846 8260C

Lab ID: SC36816-03

Client ID: PW-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	37.0	J, D	100	µg/l	SW846 8260C
Tetrachloroethene	3610	D	100	µg/l	SW846 8260C
Trichloroethene	93.0	J, D	100	µg/l	SW846 8260C

Lab ID: SC36816-04

Client ID: PW-7

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	4760	D	100	µg/l	SW846 8260C
Tetrachloroethene	4160	D	100	µg/l	SW846 8260C
Trichloroethene	825	D	100	µg/l	SW846 8260C
Vinyl chloride	343	D	100	µg/l	SW846 8260C

Lab ID: SC36816-05

Client ID: PW-8

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	747	D	20.0	µg/l	SW846 8260C
Methyl tert-butyl ether	6.40	J, D	20.0	µg/l	SW846 8260C
Tetrachloroethene	84.6	D	20.0	µg/l	SW846 8260C
Vinyl chloride	83.8	D	20.0	µg/l	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

PW-4

SC36816-01

Client Project

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 12:00

Received

11-Jul-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Re-analysis of Volatile Organic Compounds			GS1										
by SW846 8260													
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	18-Jul-17	18-Jul-17	GMA	1712250	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	82.5	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	2,750	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-4

SC36816-01

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 12:00

Received

11-Jul-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsRe-analysis of Volatile Organic Compounds
by SW846 8260

GS1

79-01-6	Trichloroethene	207	D	µg/l	50.0	24.8	50	SW846 8260C	18-Jul-17	18-Jul-17	GMA	1712250	X
75-01-4	Vinyl chloride	< 50.0	U, D	µg/l	50.0	23.6	50	"	"	"	"	"	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	102			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	102			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	97			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	104			70-130 %			"	"	"	"	"	

Sample Identification

PW-5

SC36816-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 12:30

Received

11-Jul-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	17-Jul-17	17-Jul-17	GMA	1712168	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	422	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	2,620	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	108	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

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Sample Identification

PW-5

SC36816-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 12:30

Received

11-Jul-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	82.0	D	µg/l	50.0	23.6	50	SW846 8260C	17-Jul-17	17-Jul-17	GMA	1712168	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	100			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	100			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	98			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	102			70-130 %			"	"	"	"	"	

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Sample Identification

PW-6

SC36816-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 13:00

Received

11-Jul-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	13-Jul-17	13-Jul-17	GMA	1711925	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	37.0	J, D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 100	U, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	3,610	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	93.0	J, D	µg/l	100	49.7	100	"	"	"	"	"	X

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Sample Identification

PW-6

SC36816-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 13:00

Received

11-Jul-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 100	U, D	µg/l	100	47.2	100	SW846 8260C	13-Jul-17	13-Jul-17	GMA	1711925	X
1330-20-7	Total Xylenes	< 100	U, D	µg/l	100	28.3	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	87			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	101			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	102			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	99			70-130 %			"	"	"	"	"	

Sample Identification

PW-7

SC36816-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 13:30

Received

11-Jul-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	13-Jul-17	13-Jul-17	GMA	1711925	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	4,760	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 100	U, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	4,160	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	825	D	µg/l	100	49.7	100	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-7

SC36816-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 13:30

Received

11-Jul-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	343	D	µg/l	100	47.2	100	SW846 8260C	13-Jul-17	13-Jul-17	GMA	1711925	X
1330-20-7	Total Xylenes	< 100	U, D	µg/l	100	28.3	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	89			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	100			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	100			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	98			70-130 %			"	"	"	"	"	

Sample Identification

PW-8

SC36816-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 14:00

Received

11-Jul-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 20.0	U, D	µg/l	20.0	10.6	20	SW846 8260C	13-Jul-17	13-Jul-17	GMA	1711925	X
67-64-1	Acetone	< 200	U, D	µg/l	200	16.1	20	"	"	"	"	"	X
71-43-2	Benzene	< 20.0	U, D	µg/l	20.0	5.68	20	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 10.0	U, D	µg/l	10.0	8.34	20	"	"	"	"	"	X
75-25-2	Bromoform	< 20.0	U, D	µg/l	20.0	8.50	20	"	"	"	"	"	X
74-83-9	Bromomethane	< 40.0	U, D	µg/l	40.0	17.9	20	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 40.0	U, D	µg/l	40.0	21.4	20	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 40.0	U, D	µg/l	40.0	8.24	20	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 20.0	U, D	µg/l	20.0	8.74	20	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 20.0	U, D	µg/l	20.0	4.98	20	"	"	"	"	"	X
75-00-3	Chloroethane	< 40.0	U, D	µg/l	40.0	11.8	20	"	"	"	"	"	X
67-66-3	Chloroform	< 20.0	U, D	µg/l	20.0	6.52	20	"	"	"	"	"	X
74-87-3	Chloromethane	< 40.0	U, D	µg/l	40.0	7.36	20	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 40.0	U, D	µg/l	40.0	17.3	20	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 10.0	U, D	µg/l	10.0	6.34	20	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 10.0	U, D	µg/l	10.0	4.04	20	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 20.0	U, D	µg/l	20.0	5.54	20	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 20.0	U, D	µg/l	20.0	6.28	20	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 20.0	U, D	µg/l	20.0	5.44	20	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 40.0	U, D	µg/l	40.0	11.7	20	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 20.0	U, D	µg/l	20.0	6.46	20	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 20.0	U, D	µg/l	20.0	5.54	20	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 20.0	U, D	µg/l	20.0	13.9	20	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	747	D	µg/l	20.0	6.54	20	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 20.0	U, D	µg/l	20.0	7.54	20	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 20.0	U, D	µg/l	20.0	5.84	20	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 10.0	U, D	µg/l	10.0	7.18	20	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 10.0	U, D	µg/l	10.0	6.94	20	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 20.0	U, D	µg/l	20.0	6.58	20	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 40.0	U, D	µg/l	40.0	10.6	20	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 20.0	U, D	µg/l	20.0	7.20	20	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	6.40	J, D	µg/l	20.0	4.74	20	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 40.0	U, D	µg/l	40.0	10.3	20	"	"	"	"	"	X
75-09-2	Methylene chloride	< 40.0	U, D	µg/l	40.0	13.2	20	"	"	"	"	"	X
100-42-5	Styrene	< 20.0	U, D	µg/l	20.0	8.10	20	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 10.0	U, D	µg/l	10.0	6.60	20	"	"	"	"	"	X
127-18-4	Tetrachloroethene	84.6	D	µg/l	20.0	11.4	20	"	"	"	"	"	X
108-88-3	Toluene	< 20.0	U, D	µg/l	20.0	5.98	20	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 20.0	U, D	µg/l	20.0	7.56	20	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 20.0	U, D	µg/l	20.0	10.2	20	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 20.0	U, D	µg/l	20.0	6.60	20	"	"	"	"	"	X
79-01-6	Trichloroethene	< 20.0	U, D	µg/l	20.0	9.94	20	"	"	"	"	"	X

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Sample Identification

PW-8

SC36816-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

10-Jul-17 14:00

Received

11-Jul-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	83.8	D	µg/l	20.0	9.44	20	SW846 8260C	13-Jul-17	13-Jul-17	GMA	1711925	X
1330-20-7	Total Xylenes	< 20.0	U, D	µg/l	20.0	5.66	20	"	"	"	"	"	X
110-82-7	Cyclohexane	< 100	U, D	µg/l	100	15.7	20	"	"	"	"	"	X
79-20-9	Methyl acetate	< 100	U, D	µg/l	100	12.9	20	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 100	U, D	µg/l	100	14.8	20	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	89			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	100			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	102			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	98			70-130 %			"	"	"	"	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711925 - SW846 5030 Water MS										
Blank (1711925-BLK1)					<u>Prepared & Analyzed: 13-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
Surrogate: 4-Bromofluorobenzene	44.4		µg/l		50.0		89	70-130		
Surrogate: Toluene-d8	49.9		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	51.0		µg/l		50.0		102	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711925 - SW846 5030 Water MS										
Blank (1711925-BLK1)					Prepared & Analyzed: 13-Jul-17					
Surrogate: Dibromofluoromethane	48.8		µg/l		50.0		98	70-130		
LCS (1711925-BS1)					Prepared & Analyzed: 13-Jul-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	18.3		µg/l		20.0		91	70-130		
Acetone	16.4		µg/l		20.0		82	70-130		
Benzene	18.5		µg/l		20.0		92	70-130		
Bromodichloromethane	19.0		µg/l		20.0		95	70-130		
Bromoform	17.9		µg/l		20.0		90	70-130		
Bromomethane	20.2		µg/l		20.0		101	70-130		
2-Butanone (MEK)	14.5		µg/l		20.0		72	70-130		
Carbon disulfide	18.9		µg/l		20.0		94	70-130		
Carbon tetrachloride	17.8		µg/l		20.0		89	70-130		
Chlorobenzene	18.8		µg/l		20.0		94	70-130		
Chloroethane	19.2		µg/l		20.0		96	70-130		
Chloroform	17.7		µg/l		20.0		89	70-130		
Chloromethane	16.6		µg/l		20.0		83	70-130		
1,2-Dibromo-3-chloropropane	13.9	QM9	µg/l		20.0		69	70-130		
Dibromochloromethane	17.5		µg/l		20.0		87	70-130		
1,2-Dibromoethane (EDB)	18.4		µg/l		20.0		92	70-130		
1,2-Dichlorobenzene	18.3		µg/l		20.0		91	70-130		
1,3-Dichlorobenzene	18.6		µg/l		20.0		93	70-130		
1,4-Dichlorobenzene	18.1		µg/l		20.0		90	70-130		
Dichlorodifluoromethane (Freon12)	17.5		µg/l		20.0		88	70-130		
1,1-Dichloroethane	17.2		µg/l		20.0		86	70-130		
1,2-Dichloroethane	17.3		µg/l		20.0		86	70-130		
1,1-Dichloroethene	18.8		µg/l		20.0		94	70-130		
cis-1,2-Dichloroethene	18.5		µg/l		20.0		93	70-130		
trans-1,2-Dichloroethene	15.6		µg/l		20.0		78	70-130		
1,2-Dichloropropane	17.8		µg/l		20.0		89	70-130		
cis-1,3-Dichloropropene	17.1		µg/l		20.0		86	70-130		
trans-1,3-Dichloropropene	16.4		µg/l		20.0		82	70-130		
Ethylbenzene	19.3		µg/l		20.0		97	70-130		
2-Hexanone (MBK)	14.3		µg/l		20.0		72	70-130		
Isopropylbenzene	19.5		µg/l		20.0		97	70-130		
Methyl tert-butyl ether	17.1		µg/l		20.0		86	70-130		
4-Methyl-2-pentanone (MIBK)	15.7		µg/l		20.0		79	70-130		
Methylene chloride	18.2		µg/l		20.0		91	70-130		
Styrene	17.7		µg/l		20.0		89	70-130		
1,1,2,2-Tetrachloroethane	16.4		µg/l		20.0		82	70-130		
Tetrachloroethene	17.2		µg/l		20.0		86	70-130		
Toluene	18.0		µg/l		20.0		90	70-130		
1,2,4-Trichlorobenzene	14.2		µg/l		20.0		71	70-130		
1,1,1-Trichloroethane	18.0		µg/l		20.0		90	70-130		
1,1,2-Trichloroethane	18.0		µg/l		20.0		90	70-130		
Trichloroethene	17.4		µg/l		20.0		87	70-130		
Vinyl chloride	17.3		µg/l		20.0		87	70-130		
Cyclohexane	17.1		µg/l		20.0		85	70-130		
Methyl acetate	17.9		µg/l		20.0		90	70-130		
Methylcyclohexane	17.4		µg/l		20.0		87	70-130		
Surrogate: 4-Bromofluorobenzene	51.4		µg/l		50.0		103	70-130		
Surrogate: Toluene-d8	49.5		µg/l		50.0		99	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711925 - SW846 5030 Water MS										
LCS (1711925-BS1)					Prepared & Analyzed: 13-Jul-17					
Surrogate: 1,2-Dichloroethane-d4	46.8		µg/l		50.0		94	70-130		
Surrogate: Dibromofluoromethane	48.7		µg/l		50.0		97	70-130		
LCS Dup (1711925-BSD1)					Prepared & Analyzed: 13-Jul-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	18.3		µg/l		20.0		92	70-130	0.3	20
Acetone	16.5		µg/l		20.0		83	70-130	1	20
Benzene	19.1		µg/l		20.0		95	70-130	3	20
Bromodichloromethane	19.7		µg/l		20.0		98	70-130	4	20
Bromoform	18.5		µg/l		20.0		93	70-130	3	20
Bromomethane	19.7		µg/l		20.0		99	70-130	3	20
2-Butanone (MEK)	17.1		µg/l		20.0		85	70-130	16	20
Carbon disulfide	18.7		µg/l		20.0		94	70-130	0.9	20
Carbon tetrachloride	18.0		µg/l		20.0		90	70-130	1	20
Chlorobenzene	19.2		µg/l		20.0		96	70-130	2	20
Chloroethane	19.3		µg/l		20.0		97	70-130	1	20
Chloroform	18.3		µg/l		20.0		92	70-130	3	20
Chloromethane	17.0		µg/l		20.0		85	70-130	2	20
1,2-Dibromo-3-chloropropane	15.5		µg/l		20.0		78	70-130	11	20
Dibromochloromethane	18.0		µg/l		20.0		90	70-130	3	20
1,2-Dibromoethane (EDB)	19.1		µg/l		20.0		96	70-130	4	20
1,2-Dichlorobenzene	19.2		µg/l		20.0		96	70-130	5	20
1,3-Dichlorobenzene	19.1		µg/l		20.0		95	70-130	3	20
1,4-Dichlorobenzene	18.8		µg/l		20.0		94	70-130	4	20
Dichlorodifluoromethane (Freon12)	17.6		µg/l		20.0		88	70-130	0.6	20
1,1-Dichloroethane	17.7		µg/l		20.0		88	70-130	3	20
1,2-Dichloroethane	18.2		µg/l		20.0		91	70-130	5	20
1,1-Dichloroethene	19.2		µg/l		20.0		96	70-130	2	20
cis-1,2-Dichloroethene	19.4		µg/l		20.0		97	70-130	5	20
trans-1,2-Dichloroethene	16.0		µg/l		20.0		80	70-130	2	20
1,2-Dichloropropane	18.5		µg/l		20.0		93	70-130	4	20
cis-1,3-Dichloropropene	16.8		µg/l		20.0		84	70-130	2	20
trans-1,3-Dichloropropene	15.5		µg/l		20.0		78	70-130	6	20
Ethylbenzene	19.8		µg/l		20.0		99	70-130	2	20
2-Hexanone (MBK)	15.3		µg/l		20.0		76	70-130	7	20
Isopropylbenzene	19.8		µg/l		20.0		99	70-130	1	20
Methyl tert-butyl ether	18.1		µg/l		20.0		91	70-130	6	20
4-Methyl-2-pentanone (MIBK)	16.3		µg/l		20.0		82	70-130	4	20
Methylene chloride	18.8		µg/l		20.0		94	70-130	3	20
Styrene	18.1		µg/l		20.0		90	70-130	2	20
1,1,2,2-Tetrachloroethane	17.9		µg/l		20.0		89	70-130	9	20
Tetrachloroethene	18.0		µg/l		20.0		90	70-130	5	20
Toluene	18.4		µg/l		20.0		92	70-130	2	20
1,2,4-Trichlorobenzene	16.0		µg/l		20.0		80	70-130	12	20
1,1,1-Trichloroethane	18.4		µg/l		20.0		92	70-130	2	20
1,1,2-Trichloroethane	19.0		µg/l		20.0		95	70-130	6	20
Trichloroethene	17.5		µg/l		20.0		88	70-130	0.7	20
Vinyl chloride	17.0		µg/l		20.0		85	70-130	2	20
Cyclohexane	17.1		µg/l		20.0		86	70-130	0.5	30
Methyl acetate	18.7		µg/l		20.0		93	70-130	4	30
Methylcyclohexane	18.1		µg/l		20.0		90	70-130	4	30
Surrogate: 4-Bromofluorobenzene	50.2		µg/l		50.0		100	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711925 - SW846 5030 Water MS										
LCS Dup (1711925-BSD1)					Prepared & Analyzed: 13-Jul-17					
Surrogate: Toluene-d8	49.3		µg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.8		µg/l		50.0		94	70-130		
Surrogate: Dibromofluoromethane	49.1		µg/l		50.0		98	70-130		
Matrix Spike (1711925-MS1)					Source: SC36816-01					
					Prepared & Analyzed: 13-Jul-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.2	D	µg/l		20.0	0.00	106	70-130		
Acetone	17.7	D	µg/l		20.0	0.00	89	70-130		
Benzene	21.0	D	µg/l		20.0	0.00	105	70-130		
Bromodichloromethane	21.8	D	µg/l		20.0	0.00	109	70-130		
Bromoform	19.8	D	µg/l		20.0	0.00	99	70-130		
Bromomethane	17.0	D	µg/l		20.0	0.00	85	70-130		
2-Butanone (MEK)	14.8	D	µg/l		20.0	0.00	74	70-130		
Carbon disulfide	20.0	D	µg/l		20.0	0.00	100	70-130		
Carbon tetrachloride	20.6	D	µg/l		20.0	0.00	103	70-130		
Chlorobenzene	20.3	D	µg/l		20.0	0.00	101	70-130		
Chloroethane	21.6	D	µg/l		20.0	0.00	108	70-130		
Chloroform	20.1	D	µg/l		20.0	0.00	100	70-130		
Chloromethane	18.4	D	µg/l		20.0	0.00	92	70-130		
1,2-Dibromo-3-chloropropane	15.6	D	µg/l		20.0	0.00	78	70-130		
Dibromochloromethane	19.6	D	µg/l		20.0	0.00	98	70-130		
1,2-Dibromoethane (EDB)	19.9	D	µg/l		20.0	0.00	100	70-130		
1,2-Dichlorobenzene	20.2	D	µg/l		20.0	0.00	101	70-130		
1,3-Dichlorobenzene	19.9	D	µg/l		20.0	0.00	99	70-130		
1,4-Dichlorobenzene	19.9	D	µg/l		20.0	0.00	99	70-130		
Dichlorodifluoromethane (Freon12)	16.2	D	µg/l		20.0	0.00	81	70-130		
1,1-Dichloroethane	19.8	D	µg/l		20.0	0.00	99	70-130		
1,2-Dichloroethane	20.1	D	µg/l		20.0	0.00	100	70-130		
1,1-Dichloroethene	21.2	D	µg/l		20.0	0.00	106	70-130		
cis-1,2-Dichloroethene	21.7	D	µg/l		20.0	0.63	105	70-130		
trans-1,2-Dichloroethene	16.9	D	µg/l		20.0	0.00	85	70-130		
1,2-Dichloropropane	20.0	D	µg/l		20.0	0.00	100	70-130		
cis-1,3-Dichloropropene	17.4	D	µg/l		20.0	0.00	87	70-130		
trans-1,3-Dichloropropene	15.9	D	µg/l		20.0	0.00	79	70-130		
Ethylbenzene	21.2	D	µg/l		20.0	0.00	106	70-130		
2-Hexanone (MBK)	14.8	D	µg/l		20.0	0.00	74	70-130		
Isopropylbenzene	21.4	D	µg/l		20.0	0.00	107	70-130		
Methyl tert-butyl ether	18.2	D	µg/l		20.0	0.00	91	70-130		
4-Methyl-2-pentanone (MIBK)	16.4	D	µg/l		20.0	0.00	82	70-130		
Methylene chloride	20.7	D	µg/l		20.0	0.00	104	70-130		
Styrene	19.0	D	µg/l		20.0	0.00	95	70-130		
1,1,2,2-Tetrachloroethane	18.9	D	µg/l		20.0	0.00	95	70-130		
Tetrachloroethene	42.5	D	µg/l		20.0	25.0	88	70-130		
Toluene	20.4	D	µg/l		20.0	0.00	102	70-130		
1,2,4-Trichlorobenzene	15.6	D	µg/l		20.0	0.00	78	70-130		
1,1,1-Trichloroethane	20.6	D	µg/l		20.0	0.00	103	70-130		
1,1,2-Trichloroethane	20.5	D	µg/l		20.0	0.00	103	70-130		
Trichloroethene	21.0	D	µg/l		20.0	1.70	97	70-130		
Vinyl chloride	19.1	D	µg/l		20.0	0.00	96	70-130		
Cyclohexane	19.6	D	µg/l		20.0	0.00	98	70-130		
Methyl acetate	22.4	D	µg/l		20.0	0.00	112	70-130		
Methylcyclohexane	19.8	D	µg/l		20.0	0.00	99	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711925 - SW846 5030 Water MS										
Matrix Spike (1711925-MS1)			Source: SC36816-01			Prepared & Analyzed: 13-Jul-17				
Surrogate: 4-Bromofluorobenzene	50.6		µg/l		50.0		101	70-130		
Surrogate: Toluene-d8	49.5		µg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	47.7		µg/l		50.0		95	70-130		
Surrogate: Dibromofluoromethane	49.4		µg/l		50.0		99	70-130		
Matrix Spike Dup (1711925-MSD1)			Source: SC36816-01			Prepared & Analyzed: 13-Jul-17				
1,1,2-Trichlorotrifluoroethane (Freon 113)	22.6	D	µg/l		20.0	0.00	113	70-130		20
Acetone	17.7	D	µg/l		20.0	0.00	89	70-130		20
Benzene	22.3	D	µg/l		20.0	0.00	112	70-130		20
Bromodichloromethane	22.6	D	µg/l		20.0	0.00	113	70-130		20
Bromoform	20.0	D	µg/l		20.0	0.00	100	70-130		20
Bromomethane	21.0	D	µg/l		20.0	0.00	105	70-130		20
2-Butanone (MEK)	15.3	D	µg/l		20.0	0.00	77	70-130		20
Carbon disulfide	21.7	D	µg/l		20.0	0.00	109	70-130		20
Carbon tetrachloride	21.9	D	µg/l		20.0	0.00	110	70-130		20
Chlorobenzene	21.8	D	µg/l		20.0	0.00	109	70-130		20
Chloroethane	24.1	D	µg/l		20.0	0.00	121	70-130		20
Chloroform	21.2	D	µg/l		20.0	0.00	106	70-130		20
Chloromethane	20.5	D	µg/l		20.0	0.00	102	70-130		20
1,2-Dibromo-3-chloropropane	16.4	D	µg/l		20.0	0.00	82	70-130		20
Dibromochloromethane	20.3	D	µg/l		20.0	0.00	102	70-130		20
1,2-Dibromoethane (EDB)	20.6	D	µg/l		20.0	0.00	103	70-130		20
1,2-Dichlorobenzene	21.4	D	µg/l		20.0	0.00	107	70-130		20
1,3-Dichlorobenzene	21.6	D	µg/l		20.0	0.00	108	70-130		20
1,4-Dichlorobenzene	21.0	D	µg/l		20.0	0.00	105	70-130		20
Dichlorodifluoromethane (Freon12)	18.4	D	µg/l		20.0	0.00	92	70-130		20
1,1-Dichloroethane	20.7	D	µg/l		20.0	0.00	104	70-130		20
1,2-Dichloroethane	20.3	D	µg/l		20.0	0.00	101	70-130		20
1,1-Dichloroethene	23.1	D	µg/l		20.0	0.00	116	70-130		20
cis-1,2-Dichloroethene	23.2	D	µg/l		20.0	0.63	113	70-130		20
trans-1,2-Dichloroethene	18.6	D	µg/l		20.0	0.00	93	70-130		20
1,2-Dichloropropane	20.9	D	µg/l		20.0	0.00	105	70-130		20
cis-1,3-Dichloropropene	17.8	D	µg/l		20.0	0.00	89	70-130		20
trans-1,3-Dichloropropene	15.8	D	µg/l		20.0	0.00	79	70-130		20
Ethylbenzene	23.0	D	µg/l		20.0	0.00	115	70-130		20
2-Hexanone (MBK)	14.6	D	µg/l		20.0	0.00	73	70-130		20
Isopropylbenzene	23.3	D	µg/l		20.0	0.00	116	70-130		20
Methyl tert-butyl ether	18.6	D	µg/l		20.0	0.00	93	70-130		20
4-Methyl-2-pentanone (MIBK)	16.8	D	µg/l		20.0	0.00	84	70-130		20
Methylene chloride	21.2	D	µg/l		20.0	0.00	106	70-130		20
Styrene	20.4	D	µg/l		20.0	0.00	102	70-130		20
1,1,2,2-Tetrachloroethane	19.5	D	µg/l		20.0	0.00	98	70-130		20
Tetrachloroethene	46.7	D	µg/l		20.0	25.0	109	70-130		20
Toluene	21.5	D	µg/l		20.0	0.00	107	70-130		20
1,2,4-Trichlorobenzene	17.5	D	µg/l		20.0	0.00	88	70-130		20
1,1,1-Trichloroethane	22.3	D	µg/l		20.0	0.00	112	70-130		20
1,1,2-Trichloroethane	21.0	D	µg/l		20.0	0.00	105	70-130		20
Trichloroethene	22.8	D	µg/l		20.0	1.70	105	70-130		20
Vinyl chloride	22.0	D	µg/l		20.0	0.00	110	70-130		20
Cyclohexane	21.4	D	µg/l		20.0	0.00	107	70-130		30
Methyl acetate	21.7	D	µg/l		20.0	0.00	108	70-130		30

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1711925 - SW846 5030 Water MS										
Matrix Spike Dup (1711925-MSD1)										
				Source: SC36816-01						
Methylcyclohexane	21.5	D	µg/l		20.0	0.00	108	70-130		30
Surrogate: 4-Bromofluorobenzene	50.8		µg/l		50.0		102	70-130		
Surrogate: Toluene-d8	49.4		µg/l		50.0		99	70-130		
Surrogate: 1,2-Dichloroethane-d4	47.6		µg/l		50.0		95	70-130		
Surrogate: Dibromofluoromethane	48.9		µg/l		50.0		98	70-130		
Batch 1712168 - SW846 5030 Water MS										
Blank (1712168-BLK1)										
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1712168 - SW846 5030 Water MS										
<u>Blank (1712168-BLK1)</u>					<u>Prepared & Analyzed: 17-Jul-17</u>					
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>50.3</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>50.6</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>50.4</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>52.0</i>		<i>µg/l</i>		<i>50.0</i>		<i>104</i>	<i>70-130</i>		
<u>LCS (1712168-BS1)</u>					<u>Prepared & Analyzed: 17-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	23.1		µg/l		20.0		116	70-130		
Acetone	22.5		µg/l		20.0		112	70-130		
Benzene	23.6		µg/l		20.0		118	70-130		
Bromodichloromethane	25.1		µg/l		20.0		125	70-130		
Bromoform	27.2	QC2	µg/l		20.0		136	70-130		
Bromomethane	17.1		µg/l		20.0		86	70-130		
2-Butanone (MEK)	20.3		µg/l		20.0		102	70-130		
Carbon disulfide	24.0		µg/l		20.0		120	70-130		
Carbon tetrachloride	27.7	QC2	µg/l		20.0		138	70-130		
Chlorobenzene	23.2		µg/l		20.0		116	70-130		
Chloroethane	22.6		µg/l		20.0		113	70-130		
Chloroform	23.0		µg/l		20.0		115	70-130		
Chloromethane	20.8		µg/l		20.0		104	70-130		
1,2-Dibromo-3-chloropropane	22.8		µg/l		20.0		114	70-130		
Dibromochloromethane	26.1	QM9	µg/l		20.0		131	70-130		
1,2-Dibromoethane (EDB)	23.3		µg/l		20.0		116	70-130		
1,2-Dichlorobenzene	22.1		µg/l		20.0		111	70-130		
1,3-Dichlorobenzene	22.4		µg/l		20.0		112	70-130		
1,4-Dichlorobenzene	20.8		µg/l		20.0		104	70-130		
Dichlorodifluoromethane (Freon12)	21.9		µg/l		20.0		110	70-130		
1,1-Dichloroethane	22.8		µg/l		20.0		114	70-130		
1,2-Dichloroethane	22.2		µg/l		20.0		111	70-130		
1,1-Dichloroethene	22.9		µg/l		20.0		115	70-130		
cis-1,2-Dichloroethene	22.6		µg/l		20.0		113	70-130		
trans-1,2-Dichloroethene	23.6		µg/l		20.0		118	70-130		
1,2-Dichloropropane	23.6		µg/l		20.0		118	70-130		
cis-1,3-Dichloropropene	22.4		µg/l		20.0		112	70-130		
trans-1,3-Dichloropropene	23.6		µg/l		20.0		118	70-130		
Ethylbenzene	23.0		µg/l		20.0		115	70-130		
2-Hexanone (MBK)	20.2		µg/l		20.0		101	70-130		
Isopropylbenzene	22.7		µg/l		20.0		113	70-130		
Methyl tert-butyl ether	21.8		µg/l		20.0		109	70-130		
4-Methyl-2-pentanone (MIBK)	20.2		µg/l		20.0		101	70-130		
Methylene chloride	21.3		µg/l		20.0		106	70-130		
Styrene	21.8		µg/l		20.0		109	70-130		
1,1,2,2-Tetrachloroethane	22.8		µg/l		20.0		114	70-130		
Tetrachloroethene	23.1		µg/l		20.0		115	70-130		
Toluene	22.7		µg/l		20.0		114	70-130		
1,2,4-Trichlorobenzene	21.4		µg/l		20.0		107	70-130		
1,1,1-Trichloroethane	25.4		µg/l		20.0		127	70-130		
1,1,2-Trichloroethane	22.0		µg/l		20.0		110	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1712168 - SW846 5030 Water MS										
LCS (1712168-BS1)					Prepared & Analyzed: 17-Jul-17					
Trichloroethene	22.7		µg/l		20.0		114	70-130		
Vinyl chloride	22.6		µg/l		20.0		113	70-130		
Cyclohexane	22.9		µg/l		20.0		115	70-130		
Methyl acetate	17.5		µg/l		20.0		88	70-130		
Methylcyclohexane	23.6		µg/l		20.0		118	70-130		
Surrogate: 4-Bromofluorobenzene	51.0		µg/l		50.0		102	70-130		
Surrogate: Toluene-d8	51.1		µg/l		50.0		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	49.9		µg/l		50.0		100	70-130		
Surrogate: Dibromofluoromethane	51.8		µg/l		50.0		104	70-130		
LCS Dup (1712168-BSD1)					Prepared & Analyzed: 17-Jul-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	22.5		µg/l		20.0		112	70-130	3	20
Acetone	21.3		µg/l		20.0		106	70-130	6	20
Benzene	23.2		µg/l		20.0		116	70-130	1	20
Bromodichloromethane	23.6		µg/l		20.0		118	70-130	6	20
Bromoform	26.3	QC2	µg/l		20.0		131	70-130	4	20
Bromomethane	18.3		µg/l		20.0		91	70-130	6	20
2-Butanone (MEK)	22.5		µg/l		20.0		112	70-130	10	20
Carbon disulfide	22.4		µg/l		20.0		112	70-130	7	20
Carbon tetrachloride	27.2	QC2	µg/l		20.0		136	70-130	2	20
Chlorobenzene	23.0		µg/l		20.0		115	70-130	0.7	20
Chloroethane	21.1		µg/l		20.0		106	70-130	7	20
Chloroform	22.6		µg/l		20.0		113	70-130	2	20
Chloromethane	20.8		µg/l		20.0		104	70-130	0.3	20
1,2-Dibromo-3-chloropropane	23.4		µg/l		20.0		117	70-130	3	20
Dibromochloromethane	24.8		µg/l		20.0		124	70-130	5	20
1,2-Dibromoethane (EDB)	22.3		µg/l		20.0		112	70-130	4	20
1,2-Dichlorobenzene	22.0		µg/l		20.0		110	70-130	0.3	20
1,3-Dichlorobenzene	22.7		µg/l		20.0		114	70-130	2	20
1,4-Dichlorobenzene	21.2		µg/l		20.0		106	70-130	1	20
Dichlorodifluoromethane (Freon12)	22.1		µg/l		20.0		110	70-130	0.7	20
1,1-Dichloroethane	21.9		µg/l		20.0		109	70-130	4	20
1,2-Dichloroethane	22.3		µg/l		20.0		111	70-130	0.4	20
1,1-Dichloroethene	21.7		µg/l		20.0		109	70-130	5	20
cis-1,2-Dichloroethene	22.5		µg/l		20.0		112	70-130	0.6	20
trans-1,2-Dichloroethene	21.9		µg/l		20.0		109	70-130	7	20
1,2-Dichloropropane	23.2		µg/l		20.0		116	70-130	2	20
cis-1,3-Dichloropropene	22.3		µg/l		20.0		112	70-130	0.3	20
trans-1,3-Dichloropropene	22.9		µg/l		20.0		114	70-130	3	20
Ethylbenzene	22.8		µg/l		20.0		114	70-130	1	20
2-Hexanone (MBK)	19.9		µg/l		20.0		99	70-130	2	20
Isopropylbenzene	22.4		µg/l		20.0		112	70-130	1	20
Methyl tert-butyl ether	21.5		µg/l		20.0		108	70-130	1	20
4-Methyl-2-pentanone (MIBK)	21.8		µg/l		20.0		109	70-130	8	20
Methylene chloride	21.8		µg/l		20.0		109	70-130	3	20
Styrene	20.5		µg/l		20.0		103	70-130	6	20
1,1,2,2-Tetrachloroethane	22.6		µg/l		20.0		113	70-130	0.9	20
Tetrachloroethene	24.0		µg/l		20.0		120	70-130	4	20
Toluene	21.7		µg/l		20.0		108	70-130	5	20
1,2,4-Trichlorobenzene	22.6		µg/l		20.0		113	70-130	6	20
1,1,1-Trichloroethane	23.9		µg/l		20.0		119	70-130	6	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1712168 - SW846 5030 Water MS										
<u>LCS Dup (1712168-BSD1)</u>					<u>Prepared & Analyzed: 17-Jul-17</u>					
1,1,2-Trichloroethane	22.9		µg/l		20.0		114	70-130	4	20
Trichloroethene	22.8		µg/l		20.0		114	70-130	0.3	20
Vinyl chloride	21.4		µg/l		20.0		107	70-130	5	20
Cyclohexane	24.0		µg/l		20.0		120	70-130	4	30
Methyl acetate	18.5		µg/l		20.0		92	70-130	5	30
Methylcyclohexane	24.8		µg/l		20.0		124	70-130	5	30
Surrogate: 4-Bromofluorobenzene	49.7		µg/l		50.0		99	70-130		
Surrogate: Toluene-d8	51.0		µg/l		50.0		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	50.6		µg/l		50.0		101	70-130		
Surrogate: Dibromofluoromethane	51.4		µg/l		50.0		103	70-130		
Batch 1712250 - SW846 5030 Water MS										
<u>Blank (1712250-BLK1)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1712250 - SW846 5030 Water MS										
Blank (1712250-BLK1)					<u>Prepared & Analyzed: 18-Jul-17</u>					
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>50.2</i>		µg/l		<i>50.0</i>		<i>100</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>51.1</i>		µg/l		<i>50.0</i>		<i>102</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>48.4</i>		µg/l		<i>50.0</i>		<i>97</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>50.3</i>		µg/l		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
LCS (1712250-BS1)					<u>Prepared & Analyzed: 18-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	24.2		µg/l		20.0		121	70-130		
Acetone	20.8		µg/l		20.0		104	70-130		
Benzene	23.9		µg/l		20.0		119	70-130		
Bromodichloromethane	22.7		µg/l		20.0		114	70-130		
Bromoform	23.2		µg/l		20.0		116	70-130		
Bromomethane	19.6		µg/l		20.0		98	70-130		
2-Butanone (MEK)	20.0		µg/l		20.0		100	70-130		
Carbon disulfide	23.6		µg/l		20.0		118	70-130		
Carbon tetrachloride	24.3		µg/l		20.0		122	70-130		
Chlorobenzene	22.3		µg/l		20.0		112	70-130		
Chloroethane	23.4		µg/l		20.0		117	70-130		
Chloroform	22.4		µg/l		20.0		112	70-130		
Chloromethane	22.6		µg/l		20.0		113	70-130		
1,2-Dibromo-3-chloropropane	21.9		µg/l		20.0		109	70-130		
Dibromochloromethane	23.9		µg/l		20.0		119	70-130		
1,2-Dibromoethane (EDB)	22.4		µg/l		20.0		112	70-130		
1,2-Dichlorobenzene	22.4		µg/l		20.0		112	70-130		
1,3-Dichlorobenzene	22.1		µg/l		20.0		110	70-130		
1,4-Dichlorobenzene	22.0		µg/l		20.0		110	70-130		
Dichlorodifluoromethane (Freon12)	24.2		µg/l		20.0		121	70-130		
1,1-Dichloroethane	21.7		µg/l		20.0		109	70-130		
1,2-Dichloroethane	22.1		µg/l		20.0		111	70-130		
1,1-Dichloroethene	23.8		µg/l		20.0		119	70-130		
cis-1,2-Dichloroethene	23.5		µg/l		20.0		117	70-130		
trans-1,2-Dichloroethene	23.2		µg/l		20.0		116	70-130		
1,2-Dichloropropane	22.9		µg/l		20.0		115	70-130		
cis-1,3-Dichloropropene	20.5		µg/l		20.0		103	70-130		
trans-1,3-Dichloropropene	20.8		µg/l		20.0		104	70-130		
Ethylbenzene	22.6		µg/l		20.0		113	70-130		
2-Hexanone (MBK)	21.0		µg/l		20.0		105	70-130		
Isopropylbenzene	22.0		µg/l		20.0		110	70-130		
Methyl tert-butyl ether	20.0		µg/l		20.0		100	70-130		
4-Methyl-2-pentanone (MIBK)	20.7		µg/l		20.0		103	70-130		
Methylene chloride	21.8		µg/l		20.0		109	70-130		
Styrene	21.1		µg/l		20.0		106	70-130		
1,1,2,2-Tetrachloroethane	22.3		µg/l		20.0		112	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1712250 - SW846 5030 Water MS										
<u>LCS (1712250-BS1)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
Tetrachloroethene	24.6		µg/l		20.0		123	70-130		
Toluene	23.0		µg/l		20.0		115	70-130		
1,2,4-Trichlorobenzene	21.7		µg/l		20.0		108	70-130		
1,1,1-Trichloroethane	22.7		µg/l		20.0		114	70-130		
1,1,2-Trichloroethane	22.6		µg/l		20.0		113	70-130		
Trichloroethene	22.9		µg/l		20.0		115	70-130		
Vinyl chloride	24.2		µg/l		20.0		121	70-130		
Cyclohexane	24.1		µg/l		20.0		121	70-130		
Methyl acetate	22.2		µg/l		20.0		111	70-130		
Methylcyclohexane	25.6		µg/l		20.0		128	70-130		
Surrogate: 4-Bromofluorobenzene	50.6		µg/l		50.0		101	70-130		
Surrogate: Toluene-d8	51.1		µg/l		50.0		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	49.6		µg/l		50.0		99	70-130		
Surrogate: Dibromofluoromethane	50.2		µg/l		50.0		100	70-130		
<u>LCS (1712250-BS2)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	23.2	D	µg/l		20.0		116	70-130		
Acetone	20.6	D	µg/l		20.0		103	70-130		
Benzene	23.8	D	µg/l		20.0		119	70-130		
Bromodichloromethane	22.7	D	µg/l		20.0		114	70-130		
Bromoform	22.6	D	µg/l		20.0		113	70-130		
Bromomethane	20.3	D	µg/l		20.0		102	70-130		
2-Butanone (MEK)	18.9	D	µg/l		20.0		94	70-130		
Carbon disulfide	21.5	D	µg/l		20.0		108	70-130		
Carbon tetrachloride	22.8	D	µg/l		20.0		114	70-130		
Chlorobenzene	21.7	D	µg/l		20.0		109	70-130		
Chloroethane	21.5	D	µg/l		20.0		108	70-130		
Chloroform	22.6	D	µg/l		20.0		113	70-130		
Chloromethane	20.0	D	µg/l		20.0		100	70-130		
1,2-Dibromo-3-chloropropane	19.0	D	µg/l		20.0		95	70-130		
Dibromochloromethane	23.9	D	µg/l		20.0		120	70-130		
1,2-Dibromoethane (EDB)	22.3	D	µg/l		20.0		112	70-130		
1,2-Dichlorobenzene	22.5	D	µg/l		20.0		112	70-130		
1,3-Dichlorobenzene	21.9	D	µg/l		20.0		110	70-130		
1,4-Dichlorobenzene	21.1	D	µg/l		20.0		106	70-130		
Dichlorodifluoromethane (Freon12)	21.9	D	µg/l		20.0		109	70-130		
1,1-Dichloroethane	21.0	D	µg/l		20.0		105	70-130		
1,2-Dichloroethane	21.9	D	µg/l		20.0		110	70-130		
1,1-Dichloroethene	22.3	D	µg/l		20.0		111	70-130		
cis-1,2-Dichloroethene	22.7	D	µg/l		20.0		113	70-130		
trans-1,2-Dichloroethene	22.9	D	µg/l		20.0		114	70-130		
1,2-Dichloropropane	22.9	D	µg/l		20.0		114	70-130		
cis-1,3-Dichloropropene	21.7	D	µg/l		20.0		109	70-130		
trans-1,3-Dichloropropene	21.3	D	µg/l		20.0		106	70-130		
Ethylbenzene	22.0	D	µg/l		20.0		110	70-130		
2-Hexanone (MBK)	21.7	D	µg/l		20.0		109	70-130		
Isopropylbenzene	21.5	D	µg/l		20.0		107	70-130		
Methyl tert-butyl ether	20.0	D	µg/l		20.0		100	70-130		
4-Methyl-2-pentanone (MIBK)	21.8	D	µg/l		20.0		109	70-130		
Methylene chloride	22.8	D	µg/l		20.0		114	70-130		
Styrene	21.5	D	µg/l		20.0		107	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1712250 - SW846 5030 Water MS										
<u>LCS (1712250-BS2)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
1,1,2,2-Tetrachloroethane	22.5	D	µg/l		20.0		113	70-130		
Tetrachloroethene	24.0	D	µg/l		20.0		120	70-130		
Toluene	22.6	D	µg/l		20.0		113	70-130		
1,2,4-Trichlorobenzene	22.5	D	µg/l		20.0		113	70-130		
1,1,1-Trichloroethane	21.5	D	µg/l		20.0		108	70-130		
1,1,2-Trichloroethane	23.4	D	µg/l		20.0		117	70-130		
Trichloroethene	22.4	D	µg/l		20.0		112	70-130		
Vinyl chloride	21.7	D	µg/l		20.0		109	70-130		
Cyclohexane	22.5	D	µg/l		20.0		113	70-130		
Methyl acetate	32.2	D	µg/l		20.0		161	70-130		
Methylcyclohexane	24.0	D	µg/l		20.0		120	70-130		
Surrogate: 4-Bromofluorobenzene	50.2		µg/l		50.0		100	70-130		
Surrogate: Toluene-d8	51.3		µg/l		50.0		103	70-130		
Surrogate: 1,2-Dichloroethane-d4	50.4		µg/l		50.0		101	70-130		
Surrogate: Dibromofluoromethane	51.3		µg/l		50.0		103	70-130		
<u>LCS Dup (1712250-BSD1)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	22.4		µg/l		20.0		112	70-130	8	20
Acetone	20.1		µg/l		20.0		100	70-130	4	20
Benzene	23.0		µg/l		20.0		115	70-130	4	20
Bromodichloromethane	22.2		µg/l		20.0		111	70-130	2	20
Bromoform	21.8		µg/l		20.0		109	70-130	6	20
Bromomethane	19.5		µg/l		20.0		98	70-130	0.7	20
2-Butanone (MEK)	19.2		µg/l		20.0		96	70-130	4	20
Carbon disulfide	21.7		µg/l		20.0		108	70-130	8	20
Carbon tetrachloride	23.3		µg/l		20.0		116	70-130	4	20
Chlorobenzene	22.5		µg/l		20.0		113	70-130	0.9	20
Chloroethane	22.0		µg/l		20.0		110	70-130	6	20
Chloroform	21.8		µg/l		20.0		109	70-130	3	20
Chloromethane	20.2		µg/l		20.0		101	70-130	11	20
1,2-Dibromo-3-chloropropane	20.0		µg/l		20.0		100	70-130	9	20
Dibromochloromethane	22.1		µg/l		20.0		111	70-130	8	20
1,2-Dibromoethane (EDB)	22.5		µg/l		20.0		113	70-130	0.3	20
1,2-Dichlorobenzene	20.7		µg/l		20.0		104	70-130	8	20
1,3-Dichlorobenzene	21.0		µg/l		20.0		105	70-130	5	20
1,4-Dichlorobenzene	20.2		µg/l		20.0		101	70-130	8	20
Dichlorodifluoromethane (Freon12)	22.0		µg/l		20.0		110	70-130	10	20
1,1-Dichloroethane	20.6		µg/l		20.0		103	70-130	5	20
1,2-Dichloroethane	21.2		µg/l		20.0		106	70-130	5	20
1,1-Dichloroethene	22.2		µg/l		20.0		111	70-130	7	20
cis-1,2-Dichloroethene	22.9		µg/l		20.0		114	70-130	3	20
trans-1,2-Dichloroethene	22.4		µg/l		20.0		112	70-130	3	20
1,2-Dichloropropane	22.3		µg/l		20.0		111	70-130	3	20
cis-1,3-Dichloropropene	20.6		µg/l		20.0		103	70-130	0.4	20
trans-1,3-Dichloropropene	19.5		µg/l		20.0		98	70-130	7	20
Ethylbenzene	22.2		µg/l		20.0		111	70-130	2	20
2-Hexanone (MBK)	18.8		µg/l		20.0		94	70-130	11	20
Isopropylbenzene	21.3		µg/l		20.0		106	70-130	3	20
Methyl tert-butyl ether	19.1		µg/l		20.0		96	70-130	4	20
4-Methyl-2-pentanone (MIBK)	20.5		µg/l		20.0		102	70-130	1	20
Methylene chloride	21.6		µg/l		20.0		108	70-130	1	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1712250 - SW846 5030 Water MS										
<u>LCS Dup (1712250-BSD1)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
Styrene	20.7		µg/l		20.0		104	70-130	2	20
1,1,2,2-Tetrachloroethane	21.5		µg/l		20.0		108	70-130	4	20
Tetrachloroethene	21.9		µg/l		20.0		109	70-130	12	20
Toluene	21.5		µg/l		20.0		107	70-130	7	20
1,2,4-Trichlorobenzene	21.1		µg/l		20.0		105	70-130	3	20
1,1,1-Trichloroethane	21.7		µg/l		20.0		109	70-130	5	20
1,1,2-Trichloroethane	21.9		µg/l		20.0		109	70-130	4	20
Trichloroethene	22.0		µg/l		20.0		110	70-130	4	20
Vinyl chloride	22.0		µg/l		20.0		110	70-130	10	20
Cyclohexane	22.5		µg/l		20.0		112	70-130	7	30
Methyl acetate	21.3		µg/l		20.0		107	70-130	4	30
Methylcyclohexane	22.5		µg/l		20.0		113	70-130	13	30
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>50.3</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>50.5</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>48.4</i>		<i>µg/l</i>		<i>50.0</i>		<i>97</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>50.8</i>		<i>µg/l</i>		<i>50.0</i>		<i>102</i>	<i>70-130</i>		
<u>LCS Dup (1712250-BSD2)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	24.7	D	µg/l		20.0		123	70-130	6	20
Acetone	21.8	D	µg/l		20.0		109	70-130	6	20
Benzene	24.0	D	µg/l		20.0		120	70-130	1	20
Bromodichloromethane	23.2	D	µg/l		20.0		116	70-130	2	20
Bromoform	23.0	D	µg/l		20.0		115	70-130	1	20
Bromomethane	19.8	D	µg/l		20.0		99	70-130	3	20
2-Butanone (MEK)	21.5	D	µg/l		20.0		108	70-130	13	20
Carbon disulfide	22.8	D	µg/l		20.0		114	70-130	6	20
Carbon tetrachloride	24.4	D	µg/l		20.0		122	70-130	7	20
Chlorobenzene	22.1	D	µg/l		20.0		111	70-130	2	20
Chloroethane	22.7	D	µg/l		20.0		114	70-130	5	20
Chloroform	22.7	D	µg/l		20.0		114	70-130	0.3	20
Chloromethane	21.6	D	µg/l		20.0		108	70-130	8	20
1,2-Dibromo-3-chloropropane	20.6	D	µg/l		20.0		103	70-130	8	20
Dibromochloromethane	24.8	D	µg/l		20.0		124	70-130	4	20
1,2-Dibromoethane (EDB)	23.5	D	µg/l		20.0		118	70-130	5	20
1,2-Dichlorobenzene	22.7	D	µg/l		20.0		114	70-130	1	20
1,3-Dichlorobenzene	22.4	D	µg/l		20.0		112	70-130	2	20
1,4-Dichlorobenzene	21.8	D	µg/l		20.0		109	70-130	3	20
Dichlorodifluoromethane (Freon12)	22.8	D	µg/l		20.0		114	70-130	4	20
1,1-Dichloroethane	22.1	D	µg/l		20.0		110	70-130	5	20
1,2-Dichloroethane	21.9	D	µg/l		20.0		109	70-130	0.2	20
1,1-Dichloroethene	22.9	D	µg/l		20.0		114	70-130	3	20
cis-1,2-Dichloroethene	23.5	D	µg/l		20.0		118	70-130	4	20
trans-1,2-Dichloroethene	23.9	D	µg/l		20.0		119	70-130	4	20
1,2-Dichloropropane	22.7	D	µg/l		20.0		114	70-130	0.6	20
cis-1,3-Dichloropropene	21.7	D	µg/l		20.0		108	70-130	0.2	20
trans-1,3-Dichloropropene	21.5	D	µg/l		20.0		108	70-130	1	20
Ethylbenzene	22.9	D	µg/l		20.0		115	70-130	4	20
2-Hexanone (MBK)	23.1	D	µg/l		20.0		115	70-130	6	20
Isopropylbenzene	21.8	D	µg/l		20.0		109	70-130	2	20
Methyl tert-butyl ether	20.8	D	µg/l		20.0		104	70-130	4	20
4-Methyl-2-pentanone (MIBK)	22.3	D	µg/l		20.0		112	70-130	2	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1712250 - SW846 5030 Water MS										
<u>LCS Dup (1712250-BSD2)</u>					<u>Prepared & Analyzed: 18-Jul-17</u>					
Methylene chloride	22.4	D	µg/l		20.0		112	70-130	2	20
Styrene	21.3	D	µg/l		20.0		106	70-130	1	20
1,1,2,2-Tetrachloroethane	22.9	D	µg/l		20.0		114	70-130	2	20
Tetrachloroethene	24.5	D	µg/l		20.0		122	70-130	2	20
Toluene	22.6	D	µg/l		20.0		113	70-130	0	20
1,2,4-Trichlorobenzene	23.2	D	µg/l		20.0		116	70-130	3	20
1,1,1-Trichloroethane	22.5	D	µg/l		20.0		112	70-130	4	20
1,1,2-Trichloroethane	24.3	D	µg/l		20.0		121	70-130	4	20
Trichloroethene	23.7	D	µg/l		20.0		118	70-130	6	20
Vinyl chloride	22.7	D	µg/l		20.0		114	70-130	4	20
Cyclohexane	23.8	D	µg/l		20.0		119	70-130	5	30
Methyl acetate	33.9	D	µg/l		20.0		169	70-130	5	30
Methylcyclohexane	25.0	D	µg/l		20.0		125	70-130	4	30
Surrogate: 4-Bromofluorobenzene	51.3		µg/l		50.0		103	70-130		
Surrogate: Toluene-d8	51.7		µg/l		50.0		103	70-130		
Surrogate: 1,2-Dichloroethane-d4	50.5		µg/l		50.0		101	70-130		
Surrogate: Dibromofluoromethane	51.7		µg/l		50.0		103	70-130		

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

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ACT WGT: 21.00 LB
CAD: 1286294/NET 3850
DIMS: 10x12x14 IN
BILL RECIPIENT

TO
AGNUS HUNTLEY - SAMPLE RECEIPT
EUROFINS SPECTRUM ANALYTICAL
11 ALGREN DRIVE

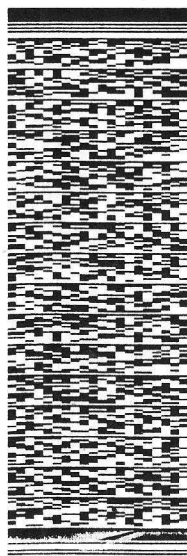
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DEPT



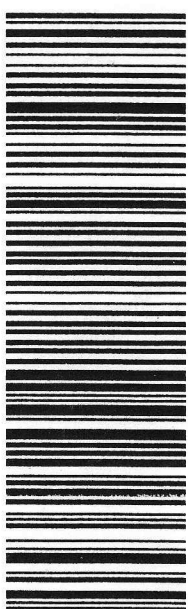
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TRK# 7795 9156 5870
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TUE - 11 JUL 3:00P
STANDARD OVERNIGHT

EB EHTA

01001
MA-US BDL



7/10/2017

RT 746
ST 15

3

15:00

F

546J1A00005301

Batch Summary

1711925

Volatile Organic Compounds

1711925-BLK1
1711925-BS1
1711925-BSD1
1711925-MS1
1711925-MSD1
SC36816-03 (PW-6)
SC36816-04 (PW-7)
SC36816-05 (PW-8)

1712168

Volatile Organic Compounds

1712168-BLK1
1712168-BS1
1712168-BSD1
SC36816-02 (PW-5)

1712250

Volatile Organic Compounds

1712250-BLK1
1712250-BS1
1712250-BS2
1712250-BSD1
1712250-BSD2
SC36816-01RE1 (PW-4)

S705685

Volatile Organic Compounds

S705685-CAL1
S705685-CAL2
S705685-CAL3
S705685-CAL4
S705685-CAL5
S705685-CAL6
S705685-CAL7
S705685-CAL8
S705685-CAL9
S705685-ICV1
S705685-LCV1
S705685-LCV2
S705685-LCV3
S705685-TUN1

S706141

Volatile Organic Compounds

S706141-CAL1
S706141-CAL2
S706141-CAL3
S706141-CAL4
S706141-CAL5
S706141-CAL6

S706141-CAL7
S706141-CAL8
S706141-CAL9
S706141-CALA
S706141-CALB
S706141-ICV1
S706141-LCV1
S706141-LCV2
S706141-TUN1

S706243

Volatile Organic Compounds

S706243-CCV1
S706243-TUN1

S706324

Volatile Organic Compounds

S706324-CCV1
S706324-TUN1

S706380

Volatile Organic Compounds

S706380-CCV1
S706380-TUN1

Report Date:
18-Sep-17 10:17**Laboratory Report**
SC39012Ecology and Environment, Inc.
368 Pleasant View Drive
Lancaster, NY 14086
Attn: Mike SteffanProject: Mr. C's - East Aurora, NY
Project #: 1703074.0011.07

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393Authorized by:

Dawn Wojcik
Laboratory Director

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 26 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis is transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC39012
Project: Mr. C's - East Aurora, NY
Project Number: 1703074.0011.07

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC39012-01	PW-4	Ground Water	08-Sep-17 10:30	09-Sep-17 12:10
SC39012-02	PW-5	Ground Water	08-Sep-17 11:00	09-Sep-17 12:10
SC39012-03	PW-6	Ground Water	08-Sep-17 11:30	09-Sep-17 12:10
SC39012-04	PW-7	Ground Water	08-Sep-17 12:00	09-Sep-17 12:10
SC39012-05	PW-8	Ground Water	08-Sep-17 12:30	09-Sep-17 12:10
SC39012-06	TB	Water	08-Sep-17 13:00	09-Sep-17 12:10

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 5.8 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Calibration:

1708013

Analyte quantified by quadratic equation type calibration.

1,2,4-Trichlorobenzene
Bromoform
cis-1,3-Dichloropropene
Dibromochloromethane
Styrene
trans-1,3-Dichloropropene

This affected the following samples:

1715669-BLK1
1715669-BS1
1715669-BSD1
1715669-MS1
1715669-MSD1
PW-4
PW-5
PW-6
PW-7
PW-8
S706970-ICV1
S708122-CCV1
TB

Laboratory Control Samples:

1715669 BS/BSD

1,2-Dibromo-3-chloropropane percent recoveries (61/63) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PW-4
PW-5
PW-6
PW-7
PW-8
TB

Spikes:

1715669-MS1 *Source: SC39012-01*

SW846 8260C

Spikes:

1715669-MS1 *Source: SC39012-01*

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

1,2-Dibromo-3-chloropropane

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

1,3-Dichlorobenzene

Bromomethane

1715669-MSD1 *Source: SC39012-01*

Analyte out of acceptance range in QC spike but no reportable concentration present in sample.

1,2-Dibromo-3-chloropropane

The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

1,3-Dichlorobenzene

Bromomethane

Tetrachloroethene

Samples:

S708122-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,2-Dibromo-3-chloropropane (-39.3%)

1,3-Dichlorobenzene (30.1%)

Tetrachloroethene (28.9%)

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

Bromoform (21.1%)

trans-1,3-Dichloropropene (-21.9%)

This affected the following samples:

1715669-BLK1

1715669-BS1

1715669-BSD1

1715669-MS1

1715669-MSD1

PW-4

PW-5

PW-6

PW-7

PW-8

TB

SC39012-01 *PW-4*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39012-02 *PW-5*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39012-03 *PW-6*

SW846 8260C

Samples:

SC39012-03 *PW-6*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39012-04 *PW-7*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39012-05 *PW-8*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39012-06 *TB*

This compound is a common laboratory contaminant.

Acetone

Sample Acceptance Check Form

Client: Ecology and Environment, Inc.
Project: Mr. C's - East Aurora, NY / 1703074.0011.07
Work Order: SC39012
Sample(s) received on: 9/9/2017

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	☐	☒	☐
Were custody seals intact?	☐	☐	☒
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	☒	☐	☐
Were samples cooled on ice upon transfer to laboratory representative?	☒	☐	☐
Were sample containers received intact?	☒	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☒	☐	☐
Were samples accompanied by a Chain of Custody document?	☒	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☒	☐	☐
Did sample container labels agree with Chain of Custody document?	☒	☐	☐
Were samples received within method-specific holding times?	☒	☐	☐

Summary of Hits

Lab ID: SC39012-01

Client ID: PW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	249	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	2440	D	50.0	µg/l	SW846 8260C
Trichloroethene	182	D	50.0	µg/l	SW846 8260C

Lab ID: SC39012-02

Client ID: PW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	86.5	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	1810	D	50.0	µg/l	SW846 8260C
Trichloroethene	63.0	D	50.0	µg/l	SW846 8260C

Lab ID: SC39012-03

Client ID: PW-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	139	D	100	µg/l	SW846 8260C
Tetrachloroethene	4520	D	100	µg/l	SW846 8260C
Trichloroethene	125	D	100	µg/l	SW846 8260C

Lab ID: SC39012-04

Client ID: PW-7

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	8050	D	100	µg/l	SW846 8260C
Tetrachloroethene	5260	D	100	µg/l	SW846 8260C
trans-1,2-Dichloroethene	55.0	J, D	100	µg/l	SW846 8260C
Trichloroethene	661	D	100	µg/l	SW846 8260C
Vinyl chloride	627	D	100	µg/l	SW846 8260C

Lab ID: SC39012-05

Client ID: PW-8

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	959	D	20.0	µg/l	SW846 8260C
Methyl tert-butyl ether	10.4	J, D	20.0	µg/l	SW846 8260C
Tetrachloroethene	116	D	20.0	µg/l	SW846 8260C
Vinyl chloride	136	D	20.0	µg/l	SW846 8260C

Lab ID: SC39012-06

Client ID: TB

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	1.53	O01, J	10.0	µg/l	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

PW-4

SC39012-01

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 10:30

Received

09-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	249	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	2,440	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	182	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-4

SC39012-01

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 10:30

Received

09-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 50.0	U, D	µg/l	50.0	23.6	50	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	88			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	106			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	99			70-130 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	119			70-130 %		"	"	"	"	"	

Sample Identification

PW-5

SC39012-02

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 11:00

Received

09-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	86.5	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	1,810	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	63.0	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

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Sample Identification

PW-5

SC39012-02

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 11:00

Received

09-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 50.0	U, D	µg/l	50.0	23.6	50	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	87			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	107			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	102			70-130 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	125			70-130 %		"	"	"	"	"	

Sample Identification

PW-6

SC39012-03

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 11:30

Received

09-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	139	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 100	U, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	4,520	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	125	D	µg/l	100	49.7	100	"	"	"	"	"	X

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Sample Identification

PW-6

SC39012-03

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 11:30

Received

09-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 100	U, D	µg/l	100	47.2	100	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
1330-20-7	Total Xylenes	< 100	U, D	µg/l	100	28.3	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	91			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	106			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	103			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	126			70-130 %			"	"	"	"	"	

Sample Identification

PW-7

SC39012-04

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 12:00

Received

09-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	8,050	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	55.0	J, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	5,260	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	661	D	µg/l	100	49.7	100	"	"	"	"	"	X

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Sample Identification

PW-7

SC39012-04

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 12:00

Received

09-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	627	D	µg/l	100	47.2	100	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
1330-20-7	Total Xylenes	< 100	U, D	µg/l	100	28.3	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	91			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	104			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	102			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	120			70-130 %			"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-8

SC39012-05

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 12:30

Received

09-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 20.0	U, D	µg/l	20.0	10.6	20	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
67-64-1	Acetone	< 200	U, D	µg/l	200	16.1	20	"	"	"	"	"	X
71-43-2	Benzene	< 20.0	U, D	µg/l	20.0	5.68	20	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 10.0	U, D	µg/l	10.0	8.34	20	"	"	"	"	"	X
75-25-2	Bromoform	< 20.0	U, D	µg/l	20.0	8.50	20	"	"	"	"	"	X
74-83-9	Bromomethane	< 40.0	U, D	µg/l	40.0	17.9	20	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 40.0	U, D	µg/l	40.0	21.4	20	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 40.0	U, D	µg/l	40.0	8.24	20	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 20.0	U, D	µg/l	20.0	8.74	20	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 20.0	U, D	µg/l	20.0	4.98	20	"	"	"	"	"	X
75-00-3	Chloroethane	< 40.0	U, D	µg/l	40.0	11.8	20	"	"	"	"	"	X
67-66-3	Chloroform	< 20.0	U, D	µg/l	20.0	6.52	20	"	"	"	"	"	X
74-87-3	Chloromethane	< 40.0	U, D	µg/l	40.0	7.36	20	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 40.0	U, D	µg/l	40.0	17.3	20	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 10.0	U, D	µg/l	10.0	6.34	20	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 10.0	U, D	µg/l	10.0	4.04	20	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 20.0	U, D	µg/l	20.0	5.54	20	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 20.0	U, D	µg/l	20.0	6.28	20	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 20.0	U, D	µg/l	20.0	5.44	20	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 40.0	U, D	µg/l	40.0	11.7	20	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 20.0	U, D	µg/l	20.0	6.46	20	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 20.0	U, D	µg/l	20.0	5.54	20	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 20.0	U, D	µg/l	20.0	13.9	20	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	959	D	µg/l	20.0	6.54	20	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 20.0	U, D	µg/l	20.0	7.54	20	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 20.0	U, D	µg/l	20.0	5.84	20	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 10.0	U, D	µg/l	10.0	7.18	20	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 10.0	U, D	µg/l	10.0	6.94	20	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 20.0	U, D	µg/l	20.0	6.58	20	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 40.0	U, D	µg/l	40.0	10.6	20	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 20.0	U, D	µg/l	20.0	7.20	20	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	10.4	J, D	µg/l	20.0	4.74	20	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 40.0	U, D	µg/l	40.0	10.3	20	"	"	"	"	"	X
75-09-2	Methylene chloride	< 40.0	U, D	µg/l	40.0	13.2	20	"	"	"	"	"	X
100-42-5	Styrene	< 20.0	U, D	µg/l	20.0	8.10	20	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 10.0	U, D	µg/l	10.0	6.60	20	"	"	"	"	"	X
127-18-4	Tetrachloroethene	116	D	µg/l	20.0	11.4	20	"	"	"	"	"	X
108-88-3	Toluene	< 20.0	U, D	µg/l	20.0	5.98	20	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 20.0	U, D	µg/l	20.0	7.56	20	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 20.0	U, D	µg/l	20.0	10.2	20	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 20.0	U, D	µg/l	20.0	6.60	20	"	"	"	"	"	X
79-01-6	Trichloroethene	< 20.0	U, D	µg/l	20.0	9.94	20	"	"	"	"	"	X

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Sample Identification

PW-8

SC39012-05

Client Project #

1703074.0011.07

Matrix

Ground Water

Collection Date/Time

08-Sep-17 12:30

Received

09-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	136	D	µg/l	20.0	9.44	20	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
1330-20-7	Total Xylenes	< 20.0	U, D	µg/l	20.0	5.66	20	"	"	"	"	"	X
110-82-7	Cyclohexane	< 100	U, D	µg/l	100	15.7	20	"	"	"	"	"	X
79-20-9	Methyl acetate	< 100	U, D	µg/l	100	12.9	20	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 100	U, D	µg/l	100	14.8	20	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	87			70-130 %		"	"	"	"	"	
2037-26-5	Toluene-d8	106			70-130 %		"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	102			70-130 %		"	"	"	"	"	
1868-53-7	Dibromofluoromethane	121			70-130 %		"	"	"	"	"	

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Sample Identification

TB

SC39012-06

Client Project #

1703074.0011.07

Matrix

Water

Collection Date/Time

08-Sep-17 13:00

Received

09-Sep-17

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5030 Water MS</u>													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00	0.53	1	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
67-64-1	Acetone	1.53	O01, J	µg/l	10.0	0.80	1	"	"	"	"	"	X
71-43-2	Benzene	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.50	U	µg/l	0.50	0.42	1	"	"	"	"	"	X
75-25-2	Bromoform	< 1.00	U	µg/l	1.00	0.42	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 2.00	U	µg/l	2.00	0.90	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 2.00	U	µg/l	2.00	1.07	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.00	U	µg/l	2.00	0.41	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 1.00	U	µg/l	1.00	0.44	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.00	U	µg/l	1.00	0.25	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 2.00	U	µg/l	2.00	0.59	1	"	"	"	"	"	X
67-66-3	Chloroform	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 2.00	U	µg/l	2.00	0.37	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00	0.86	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 0.50	U	µg/l	0.50	0.32	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50	0.20	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.31	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.27	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00	0.58	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 1.00	U	µg/l	1.00	0.32	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.00	U	µg/l	1.00	0.69	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00	0.38	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 1.00	U	µg/l	1.00	0.29	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50	0.36	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50	0.35	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 2.00	U	µg/l	2.00	0.53	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 1.00	U	µg/l	1.00	0.36	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 1.00	U	µg/l	1.00	0.24	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00	0.52	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 2.00	U	µg/l	2.00	0.66	1	"	"	"	"	"	X
100-42-5	Styrene	< 1.00	U	µg/l	1.00	0.40	1	"	"	"	"	"	X
79-34-5	1,1,1,2-Tetrachloroethane	< 0.50	U	µg/l	0.50	0.33	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 1.00	U	µg/l	1.00	0.57	1	"	"	"	"	"	X
108-88-3	Toluene	< 1.00	U	µg/l	1.00	0.30	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00	0.38	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00	0.51	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 1.00	U	µg/l	1.00	0.50	1	"	"	"	"	"	X

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Sample Identification

TB

SC39012-06

Client Project #

1703074.0011.07

Matrix

Water

Collection Date/Time

08-Sep-17 13:00

Received

09-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

75-01-4	Vinyl chloride	< 1.00	U	µg/l	1.00	0.47	1	SW846 8260C	13-Sep-17	13-Sep-17	GMA	1715669	X
1330-20-7	Total Xylenes	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
110-82-7	Cyclohexane	< 5.00	U	µg/l	5.00	0.79	1	"	"	"	"	"	X
79-20-9	Methyl acetate	< 5.00	U	µg/l	5.00	0.65	1	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 5.00	U	µg/l	5.00	0.74	1	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	88			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	107			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	100			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	120			70-130 %			"	"	"	"	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1715669 - SW846 5030 Water MS										
Blank (1715669-BLK1)					<u>Prepared & Analyzed: 13-Sep-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
Surrogate: 4-Bromofluorobenzene	45.0		µg/l		50.0		90	70-130		
Surrogate: Toluene-d8	54.3		µg/l		50.0		109	70-130		
Surrogate: 1,2-Dichloroethane-d4	51.2		µg/l		50.0		102	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1715669 - SW846 5030 Water MS										
Blank (1715669-BLK1)					Prepared & Analyzed: 13-Sep-17					
Surrogate: Dibromofluoromethane	60.3		µg/l		50.0		121	70-130		
LCS (1715669-BS1)					Prepared & Analyzed: 13-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	23.9		µg/l		20.0		120	70-130		
Acetone	22.6		µg/l		20.0		113	70-130		
Benzene	21.8		µg/l		20.0		109	70-130		
Bromodichloromethane	21.0		µg/l		20.0		105	70-130		
Bromoform	24.2		µg/l		20.0		121	70-130		
Bromomethane	16.3		µg/l		20.0		82	70-130		
2-Butanone (MEK)	20.6		µg/l		20.0		103	70-130		
Carbon disulfide	21.2		µg/l		20.0		106	70-130		
Carbon tetrachloride	21.9		µg/l		20.0		110	70-130		
Chlorobenzene	21.8		µg/l		20.0		109	70-130		
Chloroethane	21.9		µg/l		20.0		109	70-130		
Chloroform	22.3		µg/l		20.0		112	70-130		
Chloromethane	17.1		µg/l		20.0		86	70-130		
1,2-Dibromo-3-chloropropane	12.1	QC2	µg/l		20.0		61	70-130		
Dibromochloromethane	23.2		µg/l		20.0		116	70-130		
1,2-Dibromoethane (EDB)	23.7		µg/l		20.0		118	70-130		
1,2-Dichlorobenzene	18.9		µg/l		20.0		94	70-130		
1,3-Dichlorobenzene	26.0		µg/l		20.0		130	70-130		
1,4-Dichlorobenzene	18.3		µg/l		20.0		92	70-130		
Dichlorodifluoromethane (Freon12)	23.0		µg/l		20.0		115	70-130		
1,1-Dichloroethane	21.8		µg/l		20.0		109	70-130		
1,2-Dichloroethane	19.0		µg/l		20.0		95	70-130		
1,1-Dichloroethene	23.3		µg/l		20.0		116	70-130		
cis-1,2-Dichloroethene	23.5		µg/l		20.0		118	70-130		
trans-1,2-Dichloroethene	22.7		µg/l		20.0		113	70-130		
1,2-Dichloropropane	20.2		µg/l		20.0		101	70-130		
cis-1,3-Dichloropropene	17.2		µg/l		20.0		86	70-130		
trans-1,3-Dichloropropene	15.6		µg/l		20.0		78	70-130		
Ethylbenzene	21.4		µg/l		20.0		107	70-130		
2-Hexanone (MBK)	18.4		µg/l		20.0		92	70-130		
Isopropylbenzene	21.9		µg/l		20.0		110	70-130		
Methyl tert-butyl ether	20.2		µg/l		20.0		101	70-130		
4-Methyl-2-pentanone (MIBK)	18.4		µg/l		20.0		92	70-130		
Methylene chloride	23.6		µg/l		20.0		118	70-130		
Styrene	19.3		µg/l		20.0		96	70-130		
1,1,2,2-Tetrachloroethane	21.5		µg/l		20.0		107	70-130		
Tetrachloroethene	25.8		µg/l		20.0		129	70-130		
Toluene	22.8		µg/l		20.0		114	70-130		
1,2,4-Trichlorobenzene	17.0		µg/l		20.0		85	70-130		
1,1,1-Trichloroethane	19.1		µg/l		20.0		96	70-130		
1,1,2-Trichloroethane	22.4		µg/l		20.0		112	70-130		
Trichloroethene	21.2		µg/l		20.0		106	70-130		
Vinyl chloride	21.2		µg/l		20.0		106	70-130		
Cyclohexane	20.2		µg/l		20.0		101	70-130		
Methyl acetate	16.6		µg/l		20.0		83	70-130		
Methylcyclohexane	20.9		µg/l		20.0		105	70-130		
Surrogate: 4-Bromofluorobenzene	54.4		µg/l		50.0		109	70-130		
Surrogate: Toluene-d8	55.8		µg/l		50.0		112	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1715669 - SW846 5030 Water MS										
LCS (1715669-BS1)					Prepared & Analyzed: 13-Sep-17					
Surrogate: 1,2-Dichloroethane-d4	45.5		µg/l		50.0		91	70-130		
Surrogate: Dibromofluoromethane	55.9		µg/l		50.0		112	70-130		
LCS Dup (1715669-BS1)					Prepared & Analyzed: 13-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.4		µg/l		20.0		107	70-130	11	20
Acetone	21.8		µg/l		20.0		109	70-130	4	20
Benzene	20.4		µg/l		20.0		102	70-130	7	20
Bromodichloromethane	19.1		µg/l		20.0		96	70-130	9	20
Bromoform	23.4		µg/l		20.0		117	70-130	4	20
Bromomethane	14.6		µg/l		20.0		73	70-130	11	20
2-Butanone (MEK)	20.1		µg/l		20.0		101	70-130	3	20
Carbon disulfide	19.0		µg/l		20.0		95	70-130	11	20
Carbon tetrachloride	19.3		µg/l		20.0		97	70-130	13	20
Chlorobenzene	20.4		µg/l		20.0		102	70-130	7	20
Chloroethane	19.9		µg/l		20.0		99	70-130	10	20
Chloroform	20.6		µg/l		20.0		103	70-130	8	20
Chloromethane	14.7		µg/l		20.0		74	70-130	15	20
1,2-Dibromo-3-chloropropane	12.6	QC2	µg/l		20.0		63	70-130	4	20
Dibromochloromethane	22.0		µg/l		20.0		110	70-130	5	20
1,2-Dibromoethane (EDB)	22.0		µg/l		20.0		110	70-130	7	20
1,2-Dichlorobenzene	18.4		µg/l		20.0		92	70-130	3	20
1,3-Dichlorobenzene	23.9		µg/l		20.0		120	70-130	8	20
1,4-Dichlorobenzene	17.4		µg/l		20.0		87	70-130	5	20
Dichlorodifluoromethane (Freon12)	20.2		µg/l		20.0		101	70-130	13	20
1,1-Dichloroethane	20.3		µg/l		20.0		101	70-130	7	20
1,2-Dichloroethane	18.3		µg/l		20.0		92	70-130	4	20
1,1-Dichloroethene	21.0		µg/l		20.0		105	70-130	10	20
cis-1,2-Dichloroethene	21.9		µg/l		20.0		109	70-130	7	20
trans-1,2-Dichloroethene	20.6		µg/l		20.0		103	70-130	9	20
1,2-Dichloropropane	18.9		µg/l		20.0		95	70-130	7	20
cis-1,3-Dichloropropene	16.1		µg/l		20.0		80	70-130	7	20
trans-1,3-Dichloropropene	15.6		µg/l		20.0		78	70-130	0	20
Ethylbenzene	19.7		µg/l		20.0		99	70-130	8	20
2-Hexanone (MBK)	18.7		µg/l		20.0		94	70-130	2	20
Isopropylbenzene	20.7		µg/l		20.0		104	70-130	6	20
Methyl tert-butyl ether	19.2		µg/l		20.0		96	70-130	5	20
4-Methyl-2-pentanone (MIBK)	18.4		µg/l		20.0		92	70-130	0.05	20
Methylene chloride	22.1		µg/l		20.0		110	70-130	6	20
Styrene	18.6		µg/l		20.0		93	70-130	4	20
1,1,2,2-Tetrachloroethane	21.0		µg/l		20.0		105	70-130	2	20
Tetrachloroethene	22.6		µg/l		20.0		113	70-130	13	20
Toluene	21.5		µg/l		20.0		107	70-130	6	20
1,2,4-Trichlorobenzene	16.8		µg/l		20.0		84	70-130	1	20
1,1,1-Trichloroethane	17.2		µg/l		20.0		86	70-130	11	20
1,1,2-Trichloroethane	21.0		µg/l		20.0		105	70-130	6	20
Trichloroethene	18.9		µg/l		20.0		95	70-130	11	20
Vinyl chloride	18.8		µg/l		20.0		94	70-130	12	20
Cyclohexane	18.3		µg/l		20.0		92	70-130	10	30
Methyl acetate	15.6		µg/l		20.0		78	70-130	6	30
Methylcyclohexane	17.8		µg/l		20.0		89	70-130	16	30
Surrogate: 4-Bromofluorobenzene	54.1		µg/l		50.0		108	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1715669 - SW846 5030 Water MS										
LCS Dup (1715669-BSD1)					Prepared & Analyzed: 13-Sep-17					
Surrogate: Toluene-d8	54.9		µg/l		50.0		110	70-130		
Surrogate: 1,2-Dichloroethane-d4	44.3		µg/l		50.0		89	70-130		
Surrogate: Dibromofluoromethane	53.2		µg/l		50.0		106	70-130		
Matrix Spike (1715669-MS1)					Source: SC39012-01					
					Prepared & Analyzed: 13-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.1	D	µg/l		20.0	0.00	105	70-130		
Acetone	21.4	D	µg/l		20.0	0.00	107	70-130		
Benzene	22.2	D	µg/l		20.0	0.00	111	70-130		
Bromodichloromethane	21.5	D	µg/l		20.0	0.00	108	70-130		
Bromoform	25.0	D	µg/l		20.0	0.00	125	70-130		
Bromomethane	12.0	QM7, D	µg/l		20.0	0.00	60	70-130		
2-Butanone (MEK)	16.6	D	µg/l		20.0	0.00	83	70-130		
Carbon disulfide	18.6	D	µg/l		20.0	0.00	93	70-130		
Carbon tetrachloride	19.0	D	µg/l		20.0	0.00	95	70-130		
Chlorobenzene	22.8	D	µg/l		20.0	0.00	114	70-130		
Chloroethane	21.9	D	µg/l		20.0	0.00	109	70-130		
Chloroform	23.2	D	µg/l		20.0	0.00	116	70-130		
Chloromethane	16.4	D	µg/l		20.0	0.00	82	70-130		
1,2-Dibromo-3-chloropropane	12.4	QC2, D	µg/l		20.0	0.00	62	70-130		
Dibromochloromethane	24.1	D	µg/l		20.0	0.00	120	70-130		
1,2-Dibromoethane (EDB)	24.2	D	µg/l		20.0	0.00	121	70-130		
1,2-Dichlorobenzene	19.8	D	µg/l		20.0	0.00	99	70-130		
1,3-Dichlorobenzene	26.6	QM7, D	µg/l		20.0	0.00	133	70-130		
1,4-Dichlorobenzene	18.8	D	µg/l		20.0	0.00	94	70-130		
Dichlorodifluoromethane (Freon12)	18.4	D	µg/l		20.0	0.00	92	70-130		
1,1-Dichloroethane	21.7	D	µg/l		20.0	0.00	109	70-130		
1,2-Dichloroethane	20.2	D	µg/l		20.0	0.00	101	70-130		
1,1-Dichloroethene	21.4	D	µg/l		20.0	0.00	107	70-130		
cis-1,2-Dichloroethene	29.3	D	µg/l		20.0	4.98	122	70-130		
trans-1,2-Dichloroethene	22.4	D	µg/l		20.0	0.00	112	70-130		
1,2-Dichloropropane	20.3	D	µg/l		20.0	0.00	102	70-130		
cis-1,3-Dichloropropene	17.4	D	µg/l		20.0	0.00	87	70-130		
trans-1,3-Dichloropropene	15.8	D	µg/l		20.0	0.00	79	70-130		
Ethylbenzene	21.4	D	µg/l		20.0	0.00	107	70-130		
2-Hexanone (MBK)	17.2	D	µg/l		20.0	0.00	86	70-130		
Isopropylbenzene	21.8	D	µg/l		20.0	0.00	109	70-130		
Methyl tert-butyl ether	19.6	D	µg/l		20.0	0.00	98	70-130		
4-Methyl-2-pentanone (MIBK)	17.6	D	µg/l		20.0	0.00	88	70-130		
Methylene chloride	23.6	D	µg/l		20.0	0.00	118	70-130		
Styrene	19.8	D	µg/l		20.0	0.00	99	70-130		
1,1,2,2-Tetrachloroethane	22.8	D	µg/l		20.0	0.00	114	70-130		
Tetrachloroethene	73.5	D	µg/l		20.0	48.8	124	70-130		
Toluene	23.2	D	µg/l		20.0	0.00	116	70-130		
1,2,4-Trichlorobenzene	16.6	D	µg/l		20.0	0.00	83	70-130		
1,1,1-Trichloroethane	17.4	D	µg/l		20.0	0.00	87	70-130		
1,1,2-Trichloroethane	22.8	D	µg/l		20.0	0.00	114	70-130		
Trichloroethene	24.6	D	µg/l		20.0	3.65	105	70-130		
Vinyl chloride	20.2	D	µg/l		20.0	0.22	100	70-130		
Cyclohexane	17.3	D	µg/l		20.0	0.00	87	70-130		
Methyl acetate	22.4	D	µg/l		20.0	0.00	112	70-130		
Methylcyclohexane	18.7	D	µg/l		20.0	0.00	93	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1715669 - SW846 5030 Water MS										
Matrix Spike (1715669-MS1)			Source: SC39012-01			Prepared & Analyzed: 13-Sep-17				
Surrogate: 4-Bromofluorobenzene	54.3		µg/l		50.0		109	70-130		
Surrogate: Toluene-d8	55.0		µg/l		50.0		110	70-130		
Surrogate: 1,2-Dichloroethane-d4	45.4		µg/l		50.0		91	70-130		
Surrogate: Dibromofluoromethane	55.0		µg/l		50.0		110	70-130		
Matrix Spike Dup (1715669-MSD1)			Source: SC39012-01			Prepared & Analyzed: 13-Sep-17				
1,1,2-Trichlorotrifluoroethane (Freon 113)	22.3	D	µg/l		20.0	0.00	111	70-130		20
Acetone	20.6	D	µg/l		20.0	0.00	103	70-130		20
Benzene	22.1	D	µg/l		20.0	0.00	110	70-130	0.4	20
Bromodichloromethane	22.0	D	µg/l		20.0	0.00	110	70-130	2	20
Bromoform	25.9	D	µg/l		20.0	0.00	129	70-130	3	20
Bromomethane	12.5	QM7, D	µg/l		20.0	0.00	62	70-130		20
2-Butanone (MEK)	16.7	D	µg/l		20.0	0.00	84	70-130		20
Carbon disulfide	19.3	D	µg/l		20.0	0.00	97	70-130		20
Carbon tetrachloride	20.4	D	µg/l		20.0	0.00	102	70-130		20
Chlorobenzene	23.6	D	µg/l		20.0	0.00	118	70-130	3	20
Chloroethane	20.9	D	µg/l		20.0	0.00	105	70-130		20
Chloroform	22.7	D	µg/l		20.0	0.00	114	70-130	2	20
Chloromethane	17.0	D	µg/l		20.0	0.00	85	70-130		20
1,2-Dibromo-3-chloropropane	12.6	QC2, D	µg/l		20.0	0.00	63	70-130		20
Dibromochloromethane	23.5	D	µg/l		20.0	0.00	118	70-130	2	20
1,2-Dibromoethane (EDB)	23.9	D	µg/l		20.0	0.00	120	70-130	1	20
1,2-Dichlorobenzene	19.9	D	µg/l		20.0	0.00	100	70-130	1	20
1,3-Dichlorobenzene	26.6	QM7, D	µg/l		20.0	0.00	133	70-130	0.3	20
1,4-Dichlorobenzene	19.2	D	µg/l		20.0	0.00	96	70-130	2	20
Dichlorodifluoromethane (Freon12)	19.0	D	µg/l		20.0	0.00	95	70-130		20
1,1-Dichloroethane	22.2	D	µg/l		20.0	0.00	111	70-130	2	20
1,2-Dichloroethane	19.6	D	µg/l		20.0	0.00	98	70-130	3	20
1,1-Dichloroethene	22.1	D	µg/l		20.0	0.00	111	70-130		20
cis-1,2-Dichloroethene	29.0	D	µg/l		20.0	4.98	120	70-130	1	20
trans-1,2-Dichloroethene	22.9	D	µg/l		20.0	0.00	114	70-130	2	20
1,2-Dichloropropane	21.2	D	µg/l		20.0	0.00	106	70-130	4	20
cis-1,3-Dichloropropene	17.8	D	µg/l		20.0	0.00	89	70-130		20
trans-1,3-Dichloropropene	16.0	D	µg/l		20.0	0.00	80	70-130		20
Ethylbenzene	22.4	D	µg/l		20.0	0.00	112	70-130	4	20
2-Hexanone (MBK)	17.7	D	µg/l		20.0	0.00	89	70-130		20
Isopropylbenzene	22.8	D	µg/l		20.0	0.00	114	70-130	4	20
Methyl tert-butyl ether	19.2	D	µg/l		20.0	0.00	96	70-130	2	20
4-Methyl-2-pentanone (MIBK)	18.4	D	µg/l		20.0	0.00	92	70-130		20
Methylene chloride	24.3	D	µg/l		20.0	0.00	122	70-130		20
Styrene	20.9	D	µg/l		20.0	0.00	105	70-130		20
1,1,2,2-Tetrachloroethane	21.9	D	µg/l		20.0	0.00	109	70-130	4	20
Tetrachloroethene	75.8	QM7, D	µg/l		20.0	48.8	135	70-130	3	20
Toluene	23.3	D	µg/l		20.0	0.00	116	70-130	0.5	20
1,2,4-Trichlorobenzene	18.0	D	µg/l		20.0	0.00	90	70-130		20
1,1,1-Trichloroethane	17.8	D	µg/l		20.0	0.00	89	70-130		20
1,1,2-Trichloroethane	23.0	D	µg/l		20.0	0.00	115	70-130	0.9	20
Trichloroethene	25.0	D	µg/l		20.0	3.65	107	70-130		20
Vinyl chloride	20.1	D	µg/l		20.0	0.22	100	70-130		20
Cyclohexane	18.3	D	µg/l		20.0	0.00	92	70-130		30
Methyl acetate	21.8	D	µg/l		20.0	0.00	109	70-130		30

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1715669 - SW846 5030 Water MS										
Matrix Spike Dup (1715669-MSD1)			Source: SC39012-01			Prepared & Analyzed: 13-Sep-17				
Methylcyclohexane	18.4	D	µg/l		20.0	0.00	92	70-130		30
Surrogate: 4-Bromofluorobenzene	55.8		µg/l		50.0		112	70-130		
Surrogate: Toluene-d8	53.8		µg/l		50.0		108	70-130		
Surrogate: 1,2-Dichloroethane-d4	44.7		µg/l		50.0		89	70-130		
Surrogate: Dibromofluoromethane	54.0		µg/l		50.0		108	70-130		

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
O01	This compound is a common laboratory contaminant.
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM7	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.



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STD

All TATs subject to laboratory approval
Min. 24-hr notification needed for rush:
Samples disposed after 60 days unless otherwise instructed.

Special Handling:

SC3901204

Page 1 of 1

Report To:

E & E, Inc
368 Pleasantview Dr
Lancaster, MA 01006

Invoice To:

E & E, Inc

Project No.:

Site Name:

Location:

Sampler(s):

MRCS OM & MEast Aurora State: NYR. Allen

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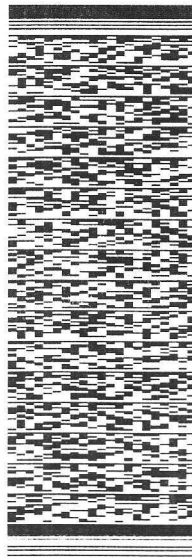
ORIGIN ID:DKKA (716) 662-4157
 DHARMA LAYER
 LAYER ENVIRONMENTAL GROUP PLLC
 44 ROLLING HILLS DR
 ORCHARD PARK, NY 14127
 UNITED STATES US

SHIP DATE: 08SEP17
 ACTWGT: 16.00 LB
 CAD: 128624/IN/3920
 DIMS: 10X12X14 N
 BILL RECIPIENT

TO AGNUS HUNTLEY - SAMPLE RECEIPT
 EUROFINS SPECTRUM ANALYTICAL
 11 ALGREN DRIVE

AGAWAM MA 01001

(413) 789-9018 REF MR CSS
 INV DEPT

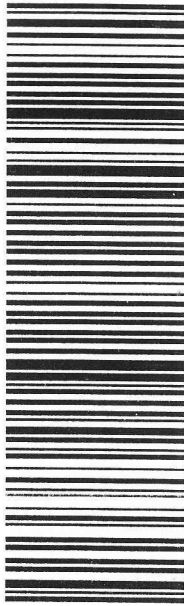


J172017062901uv

549J1.FF19/1040

TRK# 7702 1636 7671
 0201 SATURDAY 12:00P
 PRIORITY OVERNIGHT

X0 EHTA 01001
 MA-US BDL



After printing this label:

1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of \$100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is \$1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Batch Summary

1715669

Volatile Organic Compounds

1715669-BLK1
1715669-BS1
1715669-BSD1
1715669-MS1
1715669-MSD1
SC39012-01 (PW-4)
SC39012-02 (PW-5)
SC39012-03 (PW-6)
SC39012-04 (PW-7)
SC39012-05 (PW-8)
SC39012-06 (TB)

S706970

Volatile Organic Compounds

S706970-CAL1
S706970-CAL2
S706970-CAL3
S706970-CAL4
S706970-CAL5
S706970-CAL6
S706970-CAL7
S706970-CAL8
S706970-CAL9
S706970-CALA
S706970-CALB
S706970-ICV1
S706970-LCV1
S706970-LCV2
S706970-TUN1

S708122

Volatile Organic Compounds

S708122-CCV1
S708122-TUN1

Report Date:
03-Oct-17 12:03**Laboratory Report**
SC39417Ecology and Environment, Inc.
368 Pleasant View Drive
Lancaster, NY 14086
Attn: Mike SteffanProject: Mr. C's - East Aurora, NY
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Nicole Leja
President

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 38 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis is transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC39417
Project: Mr. C's - East Aurora, NY
Project Number: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC39417-01	Influent	Ground Water	18-Sep-17 12:00	19-Sep-17 10:30
SC39417-02	Effluent	Ground Water	18-Sep-17 12:00	19-Sep-17 10:30
SC39417-03	PW-4	Ground Water	18-Sep-17 12:30	19-Sep-17 10:30
SC39417-04	PW-5	Ground Water	18-Sep-17 13:00	19-Sep-17 10:30
SC39417-05	PW-6	Ground Water	18-Sep-17 13:30	19-Sep-17 10:30
SC39417-06	PW-7	Ground Water	18-Sep-17 14:00	19-Sep-17 10:30
SC39417-07	PW-8	Ground Water	18-Sep-17 14:30	19-Sep-17 10:30
SC39417-08	TB	Water	18-Sep-17 14:30	19-Sep-17 10:30

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 10.2 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Calibration:

1709039

Analyte quantified by quadratic equation type calibration.

1,2,4-Trichlorobenzene
1,2-Dibromo-3-chloropropane
2-Hexanone (MBK)
4-Methyl-2-pentanone (MIBK)
Bromoform
cis-1,3-Dichloropropene
Cyclohexane
Dibromochloromethane
Ethylbenzene
Methylcyclohexane
Styrene
trans-1,3-Dichloropropene
Vinyl chloride

This affected the following samples:

1716429-BLK1
1716429-BS1
1716429-BSD1
1716429-MS1
1716429-MSD1
Effluent
PW-4
PW-5
PW-6
PW-8
S708366-ICV1
S708539-CCV1
TB

1709054

Analyte quantified by quadratic equation type calibration.

1,2-Dibromo-3-chloropropane

SW846 8260C

Calibration:

1709054

This affected the following samples:

1716519-BLK1
1716519-BS1
1716519-BSD1
1716757-BLK1
1716757-BS1
1716757-BSD1
Influent
PW-7
S708577-CCV1
S708603-ICV1
S708692-CCV1

Laboratory Control Samples:

1716519-BS1

LCS/LCSD were analyzed in place of MS/MSD.

1716519-BSD1

LCS/LCSD were analyzed in place of MS/MSD.

1716757 BS/BSD

1,2-Dibromo-3-chloropropane percent recoveries (68/69) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PW-7

2-Hexanone (MBK) percent recoveries (70/68) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PW-7

Carbon tetrachloride percent recoveries (71/68) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PW-7

Methyl acetate percent recoveries (63/72) are outside individual acceptance criteria (70-130), but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

PW-7

1716757 BSD

Carbon disulfide RPD 32% (20%) is outside individual acceptance criteria.

Samples:

S708539-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,1,1-Trichloroethane (21.0%)
Carbon tetrachloride (23.0%)

SW846 8260C

Samples:

S708539-CCV1

This affected the following samples:

1716429-BLK1
1716429-BS1
1716429-BSD1
1716429-MS1
1716429-MSD1
Effluent
PW-4
PW-5
PW-6
PW-8
TB

S708577-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

Methyl acetate (-24.4%)

This affected the following samples:

1716519-BLK1
1716519-BS1
1716519-BSD1
Influent

S708692-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

2-Hexanone (MBK) (-29.8%)
4-Methyl-2-pentanone (MIBK) (-27.4%)
Carbon tetrachloride (-29.3%)
Methyl acetate (-37.3%)
trans-1,3-Dichloropropene (-28.5%)

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

1,2-Dibromo-3-chloropropane (-32.4%)

This affected the following samples:

1716757-BLK1
1716757-BS1
1716757-BSD1
PW-7

SC39417-01RE1 *Influent*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39417-03 *PW-4*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39417-04 *PW-5*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39417-05 *PW-6*

SW846 8260C

Samples:

SC39417-05 *PW-6*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39417-06 *PW-7*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39417-07 *PW-8*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC39417-07RE1 *PW-8*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Acceptance Check Form

Client: Ecology and Environment, Inc.
Project: Mr. C's - East Aurora, NY / [none]
Work Order: SC39417
Sample(s) received on: 9/19/2017

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	☒	☐	☐
Were custody seals intact?	☒	☐	☐
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	☐	☒	☐
Were samples cooled on ice upon transfer to laboratory representative?	☒	☐	☐
Were sample containers received intact?	☒	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☒	☐	☐
Were samples accompanied by a Chain of Custody document?	☒	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☒	☐	☐
Did sample container labels agree with Chain of Custody document?	☒	☐	☐
Were samples received within method-specific holding times?	☒	☐	☐

Summary of Hits

Lab ID: SC39417-01RE1

Client ID: Influent

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	3900	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	2120	D	50.0	µg/l	SW846 8260C
Trichloroethene	442	D	50.0	µg/l	SW846 8260C
Vinyl chloride	235	D	50.0	µg/l	SW846 8260C

Lab ID: SC39417-02

Client ID: Effluent

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Acetone	3.50	J	10.0	µg/l	SW846 8260C

Lab ID: SC39417-03

Client ID: PW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
2-Butanone (MEK)	63.5	J, D	100	µg/l	SW846 8260C
cis-1,2-Dichloroethene	1280	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	4320	D	50.0	µg/l	SW846 8260C
Trichloroethene	373	D	50.0	µg/l	SW846 8260C
Vinyl chloride	89.5	D	50.0	µg/l	SW846 8260C

Lab ID: SC39417-04

Client ID: PW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
2-Butanone (MEK)	77.0	J, D	100	µg/l	SW846 8260C
cis-1,2-Dichloroethene	38.0	J, D	50.0	µg/l	SW846 8260C
Tetrachloroethene	3420	D	50.0	µg/l	SW846 8260C
Trichloroethene	103	D	50.0	µg/l	SW846 8260C

Lab ID: SC39417-05

Client ID: PW-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	110	D	100	µg/l	SW846 8260C
Tetrachloroethene	9470	D	100	µg/l	SW846 8260C
Trichloroethene	251	D	100	µg/l	SW846 8260C

Lab ID: SC39417-06

Client ID: PW-7

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	6930	D	100	µg/l	SW846 8260C
Tetrachloroethene	4620	D	100	µg/l	SW846 8260C
Trichloroethene	844	D	100	µg/l	SW846 8260C
Vinyl chloride	405	D	100	µg/l	SW846 8260C

Lab ID: SC39417-07**Client ID:** PW-8

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	968	D, E	5.00	µg/l	SW846 8260C
Methyl tert-butyl ether	16.6	D	5.00	µg/l	SW846 8260C
Tetrachloroethene	75.4	D	5.00	µg/l	SW846 8260C
trans-1,2-Dichloroethene	3.10	J, D	5.00	µg/l	SW846 8260C
Trichloroethene	5.50	D	5.00	µg/l	SW846 8260C
Vinyl chloride	248	D	5.00	µg/l	SW846 8260C

Lab ID: SC39417-07RE1**Client ID:** PW-8

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	789	D	20.0	µg/l	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

Influent

SC39417-01

Client Project

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 12:00

Received

19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Re-analysis of Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	27-Sep-17	27-Sep-17	GMA	1716519	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	3,900	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	2,120	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification**Influent**

SC39417-01

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 12:00

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsRe-analysis of Volatile Organic Compounds
by SW846 8260

GS1

79-01-6	Trichloroethene	442	D	µg/l	50.0	24.8	50	SW846 8260C	27-Sep-17	27-Sep-17	GMA	1716519	X
75-01-4	Vinyl chloride	235	D	µg/l	50.0	23.6	50	"	"	"	"	"	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	105			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	100			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	96			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	97			70-130 %			"	"	"	"	"	

Sample Identification**Effluent**

SC39417-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 12:00

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5030 Water MS</u>													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00	0.53	1	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
67-64-1	Acetone	3.50	J	µg/l	10.0	0.80	1	"	"	"	"	"	X
71-43-2	Benzene	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.50	U	µg/l	0.50	0.42	1	"	"	"	"	"	X
75-25-2	Bromoform	< 1.00	U	µg/l	1.00	0.42	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 2.00	U	µg/l	2.00	0.90	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 2.00	U	µg/l	2.00	1.07	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.00	U	µg/l	2.00	0.41	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 1.00	U	µg/l	1.00	0.44	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.00	U	µg/l	1.00	0.25	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 2.00	U	µg/l	2.00	0.59	1	"	"	"	"	"	X
67-66-3	Chloroform	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 2.00	U	µg/l	2.00	0.37	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00	0.86	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 0.50	U	µg/l	0.50	0.32	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50	0.20	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.31	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.27	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00	0.58	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 1.00	U	µg/l	1.00	0.32	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.00	U	µg/l	1.00	0.69	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00	0.38	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 1.00	U	µg/l	1.00	0.29	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50	0.36	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50	0.35	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 2.00	U	µg/l	2.00	0.53	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 1.00	U	µg/l	1.00	0.36	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 1.00	U	µg/l	1.00	0.24	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00	0.52	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 2.00	U	µg/l	2.00	0.66	1	"	"	"	"	"	X
100-42-5	Styrene	< 1.00	U	µg/l	1.00	0.40	1	"	"	"	"	"	X
79-34-5	1,1,1,2-Tetrachloroethane	< 0.50	U	µg/l	0.50	0.33	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 1.00	U	µg/l	1.00	0.57	1	"	"	"	"	"	X
108-88-3	Toluene	< 1.00	U	µg/l	1.00	0.30	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00	0.38	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00	0.51	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 1.00	U	µg/l	1.00	0.50	1	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification**Effluent**

SC39417-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 12:00

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

75-01-4	Vinyl chloride	< 1.00	U	µg/l	1.00	0.47	1	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
1330-20-7	Total Xylenes	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
110-82-7	Cyclohexane	< 5.00	U	µg/l	5.00	0.79	1	"	"	"	"	"	X
79-20-9	Methyl acetate	< 5.00	U	µg/l	5.00	0.65	1	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 5.00	U	µg/l	5.00	0.74	1	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	97			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	96			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	103			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	102			70-130 %			"	"	"	"	"	

Sample Identification

PW-4

SC39417-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 12:30

Received

19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	63.5	J, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	1,280	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	4,320	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	373	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-4

SC39417-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 12:30

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	89.5	D	µg/l	50.0	23.6	50	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	89			70-130 %		"	"	"	"	"
2037-26-5	Toluene-d8	96			70-130 %		"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	104			70-130 %		"	"	"	"	"
1868-53-7	Dibromofluoromethane	105			70-130 %		"	"	"	"	"

Sample Identification

PW-5

SC39417-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 13:00

Received

19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	77.0	J, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	38.0	J, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	3,420	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	103	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-5

SC39417-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 13:00

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 50.0	U, D	µg/l	50.0	23.6	50	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
1330-20-7	Total Xylenes	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	90			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	96			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	105			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	102			70-130 %			"	"	"	"	"	

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-6

SC39417-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 13:30

Received

19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	110	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 100	U, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	9,470	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	251	D	µg/l	100	49.7	100	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-6

SC39417-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 13:30

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 100	U, D	µg/l	100	47.2	100	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
1330-20-7	Total Xylenes	< 100	U, D	µg/l	100	28.3	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	91			70-130 %		"	"	"	"	"
2037-26-5	Toluene-d8	97			70-130 %		"	"	"	"	"
17060-07-0	1,2-Dichloroethane-d4	107			70-130 %		"	"	"	"	"
1868-53-7	Dibromofluoromethane	105			70-130 %		"	"	"	"	"

Sample Identification

PW-7

SC39417-06

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 14:00

Received

19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	02-Oct-17	02-Oct-17	GMA	1716757	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	6,930	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 100	U, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	4,620	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	844	D	µg/l	100	49.7	100	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-7

SC39417-06

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 14:00

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic Compounds

Volatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	405	D	µg/l	100	47.2	100	SW846 8260C	02-Oct-17	02-Oct-17	GMA	1716757	X
1330-20-7	Total Xylenes	< 100	U, D	µg/l	100	28.3	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	101			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	104			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	95			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	102			70-130 %			"	"	"	"	"	

Sample Identification

PW-8

SC39417-07

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 14:30

Received

19-Sep-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 5.00	U, D	µg/l	5.00	2.66	5	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
67-64-1	Acetone	< 50.0	U, D	µg/l	50.0	4.02	5	"	"	"	"	"	X
71-43-2	Benzene	< 5.00	U, D	µg/l	5.00	1.42	5	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 2.50	U, D	µg/l	2.50	2.08	5	"	"	"	"	"	X
75-25-2	Bromoform	< 5.00	U, D	µg/l	5.00	2.12	5	"	"	"	"	"	X
74-83-9	Bromomethane	< 10.0	U, D	µg/l	10.0	4.48	5	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 10.0	U, D	µg/l	10.0	5.35	5	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 10.0	U, D	µg/l	10.0	2.06	5	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 5.00	U, D	µg/l	5.00	2.18	5	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 5.00	U, D	µg/l	5.00	1.24	5	"	"	"	"	"	X
75-00-3	Chloroethane	< 10.0	U, D	µg/l	10.0	2.94	5	"	"	"	"	"	X
67-66-3	Chloroform	< 5.00	U, D	µg/l	5.00	1.63	5	"	"	"	"	"	X
74-87-3	Chloromethane	< 10.0	U, D	µg/l	10.0	1.84	5	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 10.0	U, D	µg/l	10.0	4.32	5	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 2.50	U, D	µg/l	2.50	1.58	5	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 2.50	U, D	µg/l	2.50	1.01	5	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 5.00	U, D	µg/l	5.00	1.38	5	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 5.00	U, D	µg/l	5.00	1.57	5	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 5.00	U, D	µg/l	5.00	1.36	5	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 10.0	U, D	µg/l	10.0	2.92	5	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 5.00	U, D	µg/l	5.00	1.62	5	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 5.00	U, D	µg/l	5.00	1.38	5	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 5.00	U, D	µg/l	5.00	3.46	5	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	968	D, E	µg/l	5.00	1.64	5	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	3.10	J, D	µg/l	5.00	1.88	5	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 5.00	U, D	µg/l	5.00	1.46	5	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 2.50	U, D	µg/l	2.50	1.80	5	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 2.50	U, D	µg/l	2.50	1.74	5	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 5.00	U, D	µg/l	5.00	1.64	5	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 10.0	U, D	µg/l	10.0	2.64	5	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 5.00	U, D	µg/l	5.00	1.80	5	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	16.6	D	µg/l	5.00	1.18	5	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 10.0	U, D	µg/l	10.0	2.58	5	"	"	"	"	"	X
75-09-2	Methylene chloride	< 10.0	U, D	µg/l	10.0	3.30	5	"	"	"	"	"	X
100-42-5	Styrene	< 5.00	U, D	µg/l	5.00	2.02	5	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 2.50	U, D	µg/l	2.50	1.65	5	"	"	"	"	"	X
127-18-4	Tetrachloroethene	75.4	D	µg/l	5.00	2.85	5	"	"	"	"	"	X
108-88-3	Toluene	< 5.00	U, D	µg/l	5.00	1.50	5	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 5.00	U, D	µg/l	5.00	1.89	5	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 5.00	U, D	µg/l	5.00	2.54	5	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 5.00	U, D	µg/l	5.00	1.65	5	"	"	"	"	"	X
79-01-6	Trichloroethene	5.50	D	µg/l	5.00	2.48	5	"	"	"	"	"	X

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Sample Identification

PW-8

SC39417-07

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

18-Sep-17 14:30

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	248	D	µg/l	5.00	2.36	5	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
1330-20-7	Total Xylenes	< 5.00	U, D	µg/l	5.00	1.42	5	"	"	"	"	"	X
110-82-7	Cyclohexane	< 25.0	U, D	µg/l	25.0	3.94	5	"	"	"	"	"	X
79-20-9	Methyl acetate	< 25.0	U, D	µg/l	25.0	3.24	5	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 25.0	U, D	µg/l	25.0	3.71	5	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	91			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	98			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	109			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	107			70-130 %			"	"	"	"	"	

Re-analysis of Volatile Organic Compounds
by SW846 8260

GS1

Prepared by method SW846 5030 Water MS

156-59-2	cis-1,2-Dichloroethene	789	D	µg/l	20.0	6.54	20	SW846 8260C	02-Oct-17	02-Oct-17	GMA	1716757	X
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Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	102			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	103			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	95			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	102			70-130 %			"	"	"	"	"	

Sample Identification

TB

SC39417-08

Client Project #

[none]

Matrix

Water

Collection Date/Time

18-Sep-17 14:30

Received

19-Sep-17

<u>CAS No.</u>	<u>Analyte(s)</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>*RDL</u>	<u>MDL</u>	<u>Dilution</u>	<u>Method Ref.</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Analyst</u>	<u>Batch</u>	<u>Cert.</u>
Volatile Organic Compounds													
<u>Volatile Organic Compounds by SW846 8260</u>													
<u>Prepared by method SW846 5030 Water MS</u>													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00	0.53	1	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
67-64-1	Acetone	< 10.0	U	µg/l	10.0	0.80	1	"	"	"	"	"	X
71-43-2	Benzene	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 0.50	U	µg/l	0.50	0.42	1	"	"	"	"	"	X
75-25-2	Bromoform	< 1.00	U	µg/l	1.00	0.42	1	"	"	"	"	"	X
74-83-9	Bromomethane	< 2.00	U	µg/l	2.00	0.90	1	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 2.00	U	µg/l	2.00	1.07	1	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 2.00	U	µg/l	2.00	0.41	1	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 1.00	U	µg/l	1.00	0.44	1	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 1.00	U	µg/l	1.00	0.25	1	"	"	"	"	"	X
75-00-3	Chloroethane	< 2.00	U	µg/l	2.00	0.59	1	"	"	"	"	"	X
67-66-3	Chloroform	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
74-87-3	Chloromethane	< 2.00	U	µg/l	2.00	0.37	1	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00	0.86	1	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 0.50	U	µg/l	0.50	0.32	1	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50	0.20	1	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.31	1	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00	0.27	1	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00	0.58	1	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 1.00	U	µg/l	1.00	0.32	1	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 1.00	U	µg/l	1.00	0.69	1	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00	0.60	1	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00	0.38	1	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 1.00	U	µg/l	1.00	0.29	1	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50	0.36	1	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50	0.35	1	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 2.00	U	µg/l	2.00	0.53	1	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 1.00	U	µg/l	1.00	0.36	1	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 1.00	U	µg/l	1.00	0.24	1	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00	0.52	1	"	"	"	"	"	X
75-09-2	Methylene chloride	< 2.00	U	µg/l	2.00	0.66	1	"	"	"	"	"	X
100-42-5	Styrene	< 1.00	U	µg/l	1.00	0.40	1	"	"	"	"	"	X
79-34-5	1,1,1,2-Tetrachloroethane	< 0.50	U	µg/l	0.50	0.33	1	"	"	"	"	"	X
127-18-4	Tetrachloroethene	< 1.00	U	µg/l	1.00	0.57	1	"	"	"	"	"	X
108-88-3	Toluene	< 1.00	U	µg/l	1.00	0.30	1	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00	0.38	1	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00	0.51	1	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00	0.33	1	"	"	"	"	"	X
79-01-6	Trichloroethene	< 1.00	U	µg/l	1.00	0.50	1	"	"	"	"	"	X

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Sample Identification

TB

SC39417-08

Client Project #

[none]

Matrix

Water

Collection Date/Time

18-Sep-17 14:30

Received

19-Sep-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

75-01-4	Vinyl chloride	< 1.00	U	µg/l	1.00	0.47	1	SW846 8260C	26-Sep-17	27-Sep-17	EK	1716429	X
1330-20-7	Total Xylenes	< 1.00	U	µg/l	1.00	0.28	1	"	"	"	"	"	X
110-82-7	Cyclohexane	< 5.00	U	µg/l	5.00	0.79	1	"	"	"	"	"	X
79-20-9	Methyl acetate	< 5.00	U	µg/l	5.00	0.65	1	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 5.00	U	µg/l	5.00	0.74	1	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	92			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	96			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	109			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	107			70-130 %			"	"	"	"	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716429 - SW846 5030 Water MS										
Blank (1716429-BLK1)					<u>Prepared & Analyzed: 26-Sep-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
Surrogate: 4-Bromofluorobenzene	46.9		µg/l		50.0		94	70-130		
Surrogate: Toluene-d8	49.1		µg/l		50.0		98	70-130		
Surrogate: 1,2-Dichloroethane-d4	54.2		µg/l		50.0		108	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716429 - SW846 5030 Water MS										
Blank (1716429-BLK1)					<u>Prepared & Analyzed: 26-Sep-17</u>					
Surrogate: Dibromofluoromethane	51.0		µg/l		50.0		102	70-130		
LCS (1716429-BS1)					<u>Prepared: 26-Sep-17 Analyzed: 27-Sep-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	19.6		µg/l		20.0		98	70-130		
Acetone	21.4		µg/l		20.0		107	70-130		
Benzene	20.8		µg/l		20.0		104	70-130		
Bromodichloromethane	22.8		µg/l		20.0		114	70-130		
Bromoform	23.2		µg/l		20.0		116	70-130		
Bromomethane	22.1		µg/l		20.0		111	70-130		
2-Butanone (MEK)	19.7		µg/l		20.0		98	70-130		
Carbon disulfide	20.0		µg/l		20.0		100	70-130		
Carbon tetrachloride	23.3		µg/l		20.0		117	70-130		
Chlorobenzene	21.0		µg/l		20.0		105	70-130		
Chloroethane	20.7		µg/l		20.0		104	70-130		
Chloroform	20.1		µg/l		20.0		101	70-130		
Chloromethane	20.0		µg/l		20.0		100	70-130		
1,2-Dibromo-3-chloropropane	21.8		µg/l		20.0		109	70-130		
Dibromochloromethane	22.6		µg/l		20.0		113	70-130		
1,2-Dibromoethane (EDB)	23.1		µg/l		20.0		116	70-130		
1,2-Dichlorobenzene	20.8		µg/l		20.0		104	70-130		
1,3-Dichlorobenzene	21.3		µg/l		20.0		107	70-130		
1,4-Dichlorobenzene	20.1		µg/l		20.0		101	70-130		
Dichlorodifluoromethane (Freon12)	21.7		µg/l		20.0		108	70-130		
1,1-Dichloroethane	19.6		µg/l		20.0		98	70-130		
1,2-Dichloroethane	22.0		µg/l		20.0		110	70-130		
1,1-Dichloroethene	19.7		µg/l		20.0		99	70-130		
cis-1,2-Dichloroethene	19.6		µg/l		20.0		98	70-130		
trans-1,2-Dichloroethene	19.4		µg/l		20.0		97	70-130		
1,2-Dichloropropane	20.0		µg/l		20.0		100	70-130		
cis-1,3-Dichloropropene	21.8		µg/l		20.0		109	70-130		
trans-1,3-Dichloropropene	22.1		µg/l		20.0		110	70-130		
Ethylbenzene	19.6		µg/l		20.0		98	70-130		
2-Hexanone (MBK)	22.5		µg/l		20.0		113	70-130		
Isopropylbenzene	21.7		µg/l		20.0		109	70-130		
Methyl tert-butyl ether	23.0		µg/l		20.0		115	70-130		
4-Methyl-2-pentanone (MIBK)	21.8		µg/l		20.0		109	70-130		
Methylene chloride	18.8		µg/l		20.0		94	70-130		
Styrene	20.5		µg/l		20.0		102	70-130		
1,1,2,2-Tetrachloroethane	22.0		µg/l		20.0		110	70-130		
Tetrachloroethene	22.4		µg/l		20.0		112	70-130		
Toluene	20.4		µg/l		20.0		102	70-130		
1,2,4-Trichlorobenzene	20.3		µg/l		20.0		102	70-130		
1,1,1-Trichloroethane	22.8		µg/l		20.0		114	70-130		
1,1,2-Trichloroethane	21.4		µg/l		20.0		107	70-130		
Trichloroethene	21.0		µg/l		20.0		105	70-130		
Vinyl chloride	21.3		µg/l		20.0		106	70-130		
Cyclohexane	19.1		µg/l		20.0		96	70-130		
Methyl acetate	18.9		µg/l		20.0		94	70-130		
Methylcyclohexane	19.2		µg/l		20.0		96	70-130		
Surrogate: 4-Bromofluorobenzene	52.9		µg/l		50.0		106	70-130		
Surrogate: Toluene-d8	51.3		µg/l		50.0		103	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716429 - SW846 5030 Water MS										
LCS (1716429-BS1)					Prepared: 26-Sep-17 Analyzed: 27-Sep-17					
Surrogate: 1,2-Dichloroethane-d4	51.6		µg/l		50.0		103	70-130		
Surrogate: Dibromofluoromethane	50.1		µg/l		50.0		100	70-130		
LCS Dup (1716429-BS1)					Prepared: 26-Sep-17 Analyzed: 27-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	19.2		µg/l		20.0		96	70-130	2	20
Acetone	20.3		µg/l		20.0		101	70-130	5	20
Benzene	20.6		µg/l		20.0		103	70-130	0.9	20
Bromodichloromethane	21.9		µg/l		20.0		110	70-130	4	20
Bromoform	22.4		µg/l		20.0		112	70-130	3	20
Bromomethane	21.9		µg/l		20.0		110	70-130	1	20
2-Butanone (MEK)	19.3		µg/l		20.0		96	70-130	2	20
Carbon disulfide	20.0		µg/l		20.0		100	70-130	0.2	20
Carbon tetrachloride	22.7		µg/l		20.0		114	70-130	3	20
Chlorobenzene	20.8		µg/l		20.0		104	70-130	1	20
Chloroethane	20.2		µg/l		20.0		101	70-130	3	20
Chloroform	19.7		µg/l		20.0		99	70-130	2	20
Chloromethane	21.5		µg/l		20.0		107	70-130	7	20
1,2-Dibromo-3-chloropropane	21.7		µg/l		20.0		108	70-130	0.7	20
Dibromochloromethane	21.5		µg/l		20.0		107	70-130	5	20
1,2-Dibromoethane (EDB)	22.1		µg/l		20.0		111	70-130	4	20
1,2-Dichlorobenzene	21.6		µg/l		20.0		108	70-130	4	20
1,3-Dichlorobenzene	21.5		µg/l		20.0		107	70-130	0.8	20
1,4-Dichlorobenzene	20.1		µg/l		20.0		101	70-130	0.1	20
Dichlorodifluoromethane (Freon12)	20.8		µg/l		20.0		104	70-130	4	20
1,1-Dichloroethane	19.0		µg/l		20.0		95	70-130	3	20
1,2-Dichloroethane	20.9		µg/l		20.0		104	70-130	5	20
1,1-Dichloroethene	19.1		µg/l		20.0		96	70-130	3	20
cis-1,2-Dichloroethene	19.2		µg/l		20.0		96	70-130	2	20
trans-1,2-Dichloroethene	19.7		µg/l		20.0		98	70-130	2	20
1,2-Dichloropropane	20.0		µg/l		20.0		100	70-130	0	20
cis-1,3-Dichloropropene	21.8		µg/l		20.0		109	70-130	0.2	20
trans-1,3-Dichloropropene	22.0		µg/l		20.0		110	70-130	0.3	20
Ethylbenzene	20.0		µg/l		20.0		100	70-130	2	20
2-Hexanone (MBK)	22.3		µg/l		20.0		112	70-130	0.9	20
Isopropylbenzene	21.4		µg/l		20.0		107	70-130	1	20
Methyl tert-butyl ether	22.6		µg/l		20.0		113	70-130	2	20
4-Methyl-2-pentanone (MIBK)	21.4		µg/l		20.0		107	70-130	2	20
Methylene chloride	18.8		µg/l		20.0		94	70-130	0.4	20
Styrene	20.5		µg/l		20.0		102	70-130	0.05	20
1,1,2,2-Tetrachloroethane	21.6		µg/l		20.0		108	70-130	2	20
Tetrachloroethene	21.2		µg/l		20.0		106	70-130	6	20
Toluene	20.6		µg/l		20.0		103	70-130	1	20
1,2,4-Trichlorobenzene	20.8		µg/l		20.0		104	70-130	3	20
1,1,1-Trichloroethane	21.9		µg/l		20.0		110	70-130	4	20
1,1,2-Trichloroethane	21.1		µg/l		20.0		106	70-130	1	20
Trichloroethene	20.9		µg/l		20.0		104	70-130	0.6	20
Vinyl chloride	21.4		µg/l		20.0		107	70-130	0.3	20
Cyclohexane	19.2		µg/l		20.0		96	70-130	0.6	30
Methyl acetate	18.2		µg/l		20.0		91	70-130	4	30
Methylcyclohexane	19.3		µg/l		20.0		96	70-130	0.2	30
Surrogate: 4-Bromofluorobenzene	52.7		µg/l		50.0		105	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716429 - SW846 5030 Water MS										
LCS Dup (1716429-BSD1)					Prepared: 26-Sep-17 Analyzed: 27-Sep-17					
Surrogate: Toluene-d8	50.0		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	51.0		µg/l		50.0		102	70-130		
Surrogate: Dibromofluoromethane	49.3		µg/l		50.0		99	70-130		
Matrix Spike (1716429-MS1)					Source: SC39417-01 Prepared: 26-Sep-17 Analyzed: 27-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	17.8	D	µg/l		20.0	0.00	89	70-130		
Acetone	21.5	D	µg/l		20.0	0.00	108	70-130		
Benzene	20.2	D	µg/l		20.0	0.00	101	70-130		
Bromodichloromethane	22.1	D	µg/l		20.0	0.00	111	70-130		
Bromoform	22.2	D	µg/l		20.0	0.00	111	70-130		
Bromomethane	18.8	D	µg/l		20.0	0.00	94	70-130		
2-Butanone (MEK)	22.3	D	µg/l		20.0	0.00	112	70-130		
Carbon disulfide	17.6	D	µg/l		20.0	0.22	87	70-130		
Carbon tetrachloride	22.1	D	µg/l		20.0	0.00	110	70-130		
Chlorobenzene	20.7	D	µg/l		20.0	0.00	104	70-130		
Chloroethane	18.4	D	µg/l		20.0	0.00	92	70-130		
Chloroform	19.1	D	µg/l		20.0	0.00	96	70-130		
Chloromethane	18.3	D	µg/l		20.0	0.00	92	70-130		
1,2-Dibromo-3-chloropropane	21.0	D	µg/l		20.0	0.00	105	70-130		
Dibromochloromethane	21.7	D	µg/l		20.0	0.00	109	70-130		
1,2-Dibromoethane (EDB)	22.3	D	µg/l		20.0	0.00	111	70-130		
1,2-Dichlorobenzene	21.7	D	µg/l		20.0	0.00	108	70-130		
1,3-Dichlorobenzene	21.0	D	µg/l		20.0	0.00	105	70-130		
1,4-Dichlorobenzene	19.8	D	µg/l		20.0	0.00	99	70-130		
Dichlorodifluoromethane (Freon12)	15.5	D	µg/l		20.0	0.00	77	70-130		
1,1-Dichloroethane	19.0	D	µg/l		20.0	0.00	95	70-130		
1,2-Dichloroethane	20.7	D	µg/l		20.0	0.00	103	70-130		
1,1-Dichloroethene	18.1	D	µg/l		20.0	0.00	91	70-130		
cis-1,2-Dichloroethene	26.3	D	µg/l		20.0	8.01	91	70-130		
trans-1,2-Dichloroethene	18.3	D	µg/l		20.0	0.00	91	70-130		
1,2-Dichloropropane	19.2	D	µg/l		20.0	0.00	96	70-130		
cis-1,3-Dichloropropene	21.0	D	µg/l		20.0	0.00	105	70-130		
trans-1,3-Dichloropropene	21.8	D	µg/l		20.0	0.00	109	70-130		
Ethylbenzene	19.8	D	µg/l		20.0	0.00	99	70-130		
2-Hexanone (MBK)	21.7	D	µg/l		20.0	0.00	109	70-130		
Isopropylbenzene	20.6	D	µg/l		20.0	0.00	103	70-130		
Methyl tert-butyl ether	22.0	D	µg/l		20.0	0.00	110	70-130		
4-Methyl-2-pentanone (MIBK)	20.6	D	µg/l		20.0	0.00	103	70-130		
Methylene chloride	18.0	D	µg/l		20.0	0.00	90	70-130		
Styrene	20.7	D	µg/l		20.0	0.00	104	70-130		
1,1,2,2-Tetrachloroethane	21.2	D	µg/l		20.0	0.00	106	70-130		
Tetrachloroethene	26.2	D	µg/l		20.0	4.61	108	70-130		
Toluene	19.9	D	µg/l		20.0	0.00	100	70-130		
1,2,4-Trichlorobenzene	21.3	D	µg/l		20.0	0.00	106	70-130		
1,1,1-Trichloroethane	21.9	D	µg/l		20.0	0.00	110	70-130		
1,1,2-Trichloroethane	20.1	D	µg/l		20.0	0.00	101	70-130		
Trichloroethene	21.4	D	µg/l		20.0	0.93	102	70-130		
Vinyl chloride	17.5	D	µg/l		20.0	0.29	86	70-130		
Cyclohexane	17.8	D	µg/l		20.0	0.00	89	70-130		
Methyl acetate	17.1	D	µg/l		20.0	0.00	85	70-130		
Methylcyclohexane	17.9	D	µg/l		20.0	0.00	90	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716429 - SW846 5030 Water MS										
Matrix Spike (1716429-MS1)			Source: SC39417-01		Prepared: 26-Sep-17 Analyzed: 27-Sep-17					
Surrogate: 4-Bromofluorobenzene	52.2		µg/l		50.0		104	70-130		
Surrogate: Toluene-d8	50.6		µg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	50.0		µg/l		50.0		100	70-130		
Surrogate: Dibromofluoromethane	48.2		µg/l		50.0		96	70-130		
Matrix Spike Dup (1716429-MSD1)			Source: SC39417-01		Prepared: 26-Sep-17 Analyzed: 27-Sep-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	16.9	D	µg/l		20.0	0.00	84	70-130		20
Acetone	20.7	D	µg/l		20.0	0.00	104	70-130		20
Benzene	19.8	D	µg/l		20.0	0.00	99	70-130		20
Bromodichloromethane	21.2	D	µg/l		20.0	0.00	106	70-130		20
Bromoform	21.7	D	µg/l		20.0	0.00	109	70-130		20
Bromomethane	20.7	D	µg/l		20.0	0.00	104	70-130		20
2-Butanone (MEK)	21.4	D	µg/l		20.0	0.00	107	70-130		20
Carbon disulfide	17.0	D	µg/l		20.0	0.22	84	70-130		20
Carbon tetrachloride	21.2	D	µg/l		20.0	0.00	106	70-130		20
Chlorobenzene	20.4	D	µg/l		20.0	0.00	102	70-130		20
Chloroethane	18.2	D	µg/l		20.0	0.00	91	70-130		20
Chloroform	19.0	D	µg/l		20.0	0.00	95	70-130		20
Chloromethane	18.0	D	µg/l		20.0	0.00	90	70-130		20
1,2-Dibromo-3-chloropropane	21.0	D	µg/l		20.0	0.00	105	70-130		20
Dibromochloromethane	21.5	D	µg/l		20.0	0.00	108	70-130		20
1,2-Dibromoethane (EDB)	22.2	D	µg/l		20.0	0.00	111	70-130		20
1,2-Dichlorobenzene	21.7	D	µg/l		20.0	0.00	108	70-130		20
1,3-Dichlorobenzene	20.6	D	µg/l		20.0	0.00	103	70-130		20
1,4-Dichlorobenzene	19.8	D	µg/l		20.0	0.00	99	70-130		20
Dichlorodifluoromethane (Freon12)	14.8	D	µg/l		20.0	0.00	74	70-130		20
1,1-Dichloroethane	18.6	D	µg/l		20.0	0.00	93	70-130		20
1,2-Dichloroethane	20.4	D	µg/l		20.0	0.00	102	70-130		20
1,1-Dichloroethene	17.5	D	µg/l		20.0	0.00	88	70-130		20
cis-1,2-Dichloroethene	26.6	D	µg/l		20.0	8.01	93	70-130		20
trans-1,2-Dichloroethene	18.1	D	µg/l		20.0	0.00	91	70-130		20
1,2-Dichloropropane	19.3	D	µg/l		20.0	0.00	97	70-130		20
cis-1,3-Dichloropropene	21.3	D	µg/l		20.0	0.00	106	70-130		20
trans-1,3-Dichloropropene	21.5	D	µg/l		20.0	0.00	108	70-130		20
Ethylbenzene	19.0	D	µg/l		20.0	0.00	95	70-130		20
2-Hexanone (MBK)	21.7	D	µg/l		20.0	0.00	109	70-130		20
Isopropylbenzene	20.4	D	µg/l		20.0	0.00	102	70-130		20
Methyl tert-butyl ether	22.0	D	µg/l		20.0	0.00	110	70-130		20
4-Methyl-2-pentanone (MIBK)	21.8	D	µg/l		20.0	0.00	109	70-130		20
Methylene chloride	17.6	D	µg/l		20.0	0.00	88	70-130		20
Styrene	20.0	D	µg/l		20.0	0.00	100	70-130		20
1,1,2,2-Tetrachloroethane	20.4	D	µg/l		20.0	0.00	102	70-130		20
Tetrachloroethene	26.1	D	µg/l		20.0	4.61	107	70-130		20
Toluene	19.7	D	µg/l		20.0	0.00	99	70-130		20
1,2,4-Trichlorobenzene	21.1	D	µg/l		20.0	0.00	106	70-130		20
1,1,1-Trichloroethane	21.5	D	µg/l		20.0	0.00	108	70-130		20
1,1,2-Trichloroethane	20.5	D	µg/l		20.0	0.00	103	70-130		20
Trichloroethene	21.2	D	µg/l		20.0	0.93	102	70-130		20
Vinyl chloride	17.4	D	µg/l		20.0	0.29	86	70-130		20
Cyclohexane	17.3	D	µg/l		20.0	0.00	86	70-130		30
Methyl acetate	17.4	D	µg/l		20.0	0.00	87	70-130		30

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716429 - SW846 5030 Water MS										
Matrix Spike Dup (1716429-MSD1)				Source: SC39417-01				Prepared: 26-Sep-17 Analyzed: 27-Sep-17		
Methylcyclohexane	17.9	D	µg/l		20.0	0.00	89	70-130		30
Surrogate: 4-Bromofluorobenzene	51.7		µg/l		50.0		103	70-130		
Surrogate: Toluene-d8	49.8		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	50.8		µg/l		50.0		102	70-130		
Surrogate: Dibromofluoromethane	49.1		µg/l		50.0		98	70-130		
Batch 1716519 - SW846 5030 Water MS										
Blank (1716519-BLK1)								Prepared & Analyzed: 27-Sep-17		
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716519 - SW846 5030 Water MS										
Blank (1716519-BLK1)					<u>Prepared & Analyzed: 27-Sep-17</u>					
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
<i>Surrogate: 4-Bromofluorobenzene</i>	52.2		µg/l		50.0		104	70-130		
<i>Surrogate: Toluene-d8</i>	49.9		µg/l		50.0		100	70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	48.8		µg/l		50.0		98	70-130		
<i>Surrogate: Dibromofluoromethane</i>	49.8		µg/l		50.0		100	70-130		
LCS (1716519-BS1)					<u>Prepared & Analyzed: 27-Sep-17</u>					
					QM10					
1,1,2-Trichlorotrifluoroethane (Freon 113)	19.3		µg/l		20.0		96	70-130		
Acetone	17.0		µg/l		20.0		85	70-130		
Benzene	19.2		µg/l		20.0		96	70-130		
Bromodichloromethane	19.7		µg/l		20.0		99	70-130		
Bromoform	20.2		µg/l		20.0		101	70-130		
Bromomethane	19.0		µg/l		20.0		95	70-130		
2-Butanone (MEK)	16.0		µg/l		20.0		80	70-130		
Carbon disulfide	18.0		µg/l		20.0		90	70-130		
Carbon tetrachloride	19.1		µg/l		20.0		95	70-130		
Chlorobenzene	20.3		µg/l		20.0		102	70-130		
Chloroethane	18.5		µg/l		20.0		93	70-130		
Chloroform	18.5		µg/l		20.0		92	70-130		
Chloromethane	18.4		µg/l		20.0		92	70-130		
1,2-Dibromo-3-chloropropane	19.9		µg/l		20.0		100	70-130		
Dibromochloromethane	19.3		µg/l		20.0		97	70-130		
1,2-Dibromoethane (EDB)	19.8		µg/l		20.0		99	70-130		
1,2-Dichlorobenzene	20.2		µg/l		20.0		101	70-130		
1,3-Dichlorobenzene	20.1		µg/l		20.0		101	70-130		
1,4-Dichlorobenzene	19.9		µg/l		20.0		100	70-130		
Dichlorodifluoromethane (Freon12)	19.1		µg/l		20.0		96	70-130		
1,1-Dichloroethane	18.9		µg/l		20.0		95	70-130		
1,2-Dichloroethane	19.4		µg/l		20.0		97	70-130		
1,1-Dichloroethene	18.9		µg/l		20.0		95	70-130		
cis-1,2-Dichloroethene	19.2		µg/l		20.0		96	70-130		
trans-1,2-Dichloroethene	19.0		µg/l		20.0		95	70-130		
1,2-Dichloropropane	19.0		µg/l		20.0		95	70-130		
cis-1,3-Dichloropropene	19.5		µg/l		20.0		98	70-130		
trans-1,3-Dichloropropene	20.1		µg/l		20.0		100	70-130		
Ethylbenzene	19.9		µg/l		20.0		100	70-130		
2-Hexanone (MBK)	18.0		µg/l		20.0		90	70-130		
Isopropylbenzene	19.8		µg/l		20.0		99	70-130		
Methyl tert-butyl ether	19.6		µg/l		20.0		98	70-130		
4-Methyl-2-pentanone (MIBK)	19.3		µg/l		20.0		96	70-130		
Methylene chloride	19.3		µg/l		20.0		96	70-130		
Styrene	20.1		µg/l		20.0		101	70-130		
1,1,2,2-Tetrachloroethane	20.3		µg/l		20.0		101	70-130		
Tetrachloroethene	19.4		µg/l		20.0		97	70-130		
Toluene	19.0		µg/l		20.0		95	70-130		
1,2,4-Trichlorobenzene	20.6		µg/l		20.0		103	70-130		
1,1,1-Trichloroethane	19.4		µg/l		20.0		97	70-130		
1,1,2-Trichloroethane	19.3		µg/l		20.0		97	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1716519 - SW846 5030 Water MS										
<u>LCS (1716519-BS1)</u>			QM10				<u>Prepared & Analyzed: 27-Sep-17</u>			
Trichloroethene	19.0		µg/l		20.0		95	70-130		
Vinyl chloride	20.4		µg/l		20.0		102	70-130		
Cyclohexane	19.4		µg/l		20.0		97	70-130		
Methyl acetate	16.2		µg/l		20.0		81	70-130		
Methylcyclohexane	19.3		µg/l		20.0		96	70-130		
<i>Surrogate: 4-Bromofluorobenzene</i>	51.6		µg/l		50.0		103	70-130		
<i>Surrogate: Toluene-d8</i>	50.1		µg/l		50.0		100	70-130		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	49.0		µg/l		50.0		98	70-130		
<i>Surrogate: Dibromofluoromethane</i>	48.1		µg/l		50.0		96	70-130		
<u>LCS Dup (1716519-BSD1)</u>			QM10				<u>Prepared & Analyzed: 27-Sep-17</u>			
1,1,2-Trichlorotrifluoroethane (Freon 113)	18.3		µg/l		20.0		91	70-130	5	20
Acetone	17.0		µg/l		20.0		85	70-130	0.06	20
Benzene	18.2		µg/l		20.0		91	70-130	5	20
Bromodichloromethane	19.0		µg/l		20.0		95	70-130	4	20
Bromoform	19.6		µg/l		20.0		98	70-130	3	20
Bromomethane	18.0		µg/l		20.0		90	70-130	5	20
2-Butanone (MEK)	16.4		µg/l		20.0		82	70-130	2	20
Carbon disulfide	16.5		µg/l		20.0		82	70-130	9	20
Carbon tetrachloride	17.7		µg/l		20.0		88	70-130	8	20
Chlorobenzene	19.3		µg/l		20.0		96	70-130	5	20
Chloroethane	17.6		µg/l		20.0		88	70-130	5	20
Chloroform	17.9		µg/l		20.0		90	70-130	3	20
Chloromethane	17.6		µg/l		20.0		88	70-130	4	20
1,2-Dibromo-3-chloropropane	18.6		µg/l		20.0		93	70-130	7	20
Dibromochloromethane	18.9		µg/l		20.0		94	70-130	2	20
1,2-Dibromoethane (EDB)	19.6		µg/l		20.0		98	70-130	1	20
1,2-Dichlorobenzene	19.5		µg/l		20.0		98	70-130	4	20
1,3-Dichlorobenzene	19.2		µg/l		20.0		96	70-130	5	20
1,4-Dichlorobenzene	19.2		µg/l		20.0		96	70-130	4	20
Dichlorodifluoromethane (Freon12)	18.0		µg/l		20.0		90	70-130	6	20
1,1-Dichloroethane	18.6		µg/l		20.0		93	70-130	2	20
1,2-Dichloroethane	19.2		µg/l		20.0		96	70-130	1	20
1,1-Dichloroethene	18.4		µg/l		20.0		92	70-130	3	20
cis-1,2-Dichloroethene	18.3		µg/l		20.0		92	70-130	5	20
trans-1,2-Dichloroethene	17.8		µg/l		20.0		89	70-130	6	20
1,2-Dichloropropane	18.3		µg/l		20.0		92	70-130	4	20
cis-1,3-Dichloropropene	19.0		µg/l		20.0		95	70-130	3	20
trans-1,3-Dichloropropene	18.9		µg/l		20.0		94	70-130	6	20
Ethylbenzene	19.0		µg/l		20.0		95	70-130	4	20
2-Hexanone (MBK)	18.4		µg/l		20.0		92	70-130	2	20
Isopropylbenzene	18.8		µg/l		20.0		94	70-130	5	20
Methyl tert-butyl ether	19.2		µg/l		20.0		96	70-130	2	20
4-Methyl-2-pentanone (MIBK)	18.7		µg/l		20.0		93	70-130	3	20
Methylene chloride	18.8		µg/l		20.0		94	70-130	2	20
Styrene	19.2		µg/l		20.0		96	70-130	5	20
1,1,2,2-Tetrachloroethane	20.0		µg/l		20.0		100	70-130	2	20
Tetrachloroethene	18.4		µg/l		20.0		92	70-130	5	20
Toluene	18.3		µg/l		20.0		91	70-130	4	20
1,2,4-Trichlorobenzene	19.4		µg/l		20.0		97	70-130	6	20
1,1,1-Trichloroethane	18.4		µg/l		20.0		92	70-130	5	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1716519 - SW846 5030 Water MS										
<u>LCS Dup (1716519-BSD1)</u>			QM10					Prepared & Analyzed: 27-Sep-17		
1,1,2-Trichloroethane	18.8		µg/l		20.0		94	70-130	3	20
Trichloroethene	17.9		µg/l		20.0		89	70-130	6	20
Vinyl chloride	18.8		µg/l		20.0		94	70-130	8	20
Cyclohexane	18.0		µg/l		20.0		90	70-130	8	30
Methyl acetate	15.4		µg/l		20.0		77	70-130	5	30
Methylcyclohexane	18.0		µg/l		20.0		90	70-130	7	30
Surrogate: 4-Bromofluorobenzene	51.2		µg/l		50.0		102	70-130		
Surrogate: Toluene-d8	50.4		µg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	49.5		µg/l		50.0		99	70-130		
Surrogate: Dibromofluoromethane	49.3		µg/l		50.0		99	70-130		
Batch 1716757 - SW846 5030 Water MS										
<u>Blank (1716757-BLK1)</u>								Prepared & Analyzed: 02-Oct-17		
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,1,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1716757 - SW846 5030 Water MS										
<u>Blank (1716757-BLK1)</u>					<u>Prepared & Analyzed: 02-Oct-17</u>					
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						
Total Xylenes	< 1.00	U	µg/l	1.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>51.5</i>		<i>µg/l</i>		<i>50.0</i>		<i>103</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>50.9</i>		<i>µg/l</i>		<i>50.0</i>		<i>102</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>47.5</i>		<i>µg/l</i>		<i>50.0</i>		<i>95</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>51.0</i>		<i>µg/l</i>		<i>50.0</i>		<i>102</i>	<i>70-130</i>		
<u>LCS (1716757-BS1)</u>					<u>Prepared & Analyzed: 02-Oct-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.3		µg/l		20.0		101	70-130		
Acetone	16.7		µg/l		20.0		84	70-130		
Benzene	18.9		µg/l		20.0		95	70-130		
Bromodichloromethane	18.4		µg/l		20.0		92	70-130		
Bromoform	19.6		µg/l		20.0		98	70-130		
Bromomethane	17.8		µg/l		20.0		89	70-130		
2-Butanone (MEK)	17.3		µg/l		20.0		87	70-130		
Carbon disulfide	17.7		µg/l		20.0		88	70-130		
Carbon tetrachloride	14.1		µg/l		20.0		71	70-130		
Chlorobenzene	20.6		µg/l		20.0		103	70-130		
Chloroethane	17.8		µg/l		20.0		89	70-130		
Chloroform	18.6		µg/l		20.0		93	70-130		
Chloromethane	17.2		µg/l		20.0		86	70-130		
1,2-Dibromo-3-chloropropane	13.5	QC2	µg/l		20.0		68	70-130		
Dibromochloromethane	18.2		µg/l		20.0		91	70-130		
1,2-Dibromoethane (EDB)	19.0		µg/l		20.0		95	70-130		
1,2-Dichlorobenzene	19.6		µg/l		20.0		98	70-130		
1,3-Dichlorobenzene	21.4		µg/l		20.0		107	70-130		
1,4-Dichlorobenzene	19.0		µg/l		20.0		95	70-130		
Dichlorodifluoromethane (Freon12)	20.4		µg/l		20.0		102	70-130		
1,1-Dichloroethane	18.0		µg/l		20.0		90	70-130		
1,2-Dichloroethane	18.6		µg/l		20.0		93	70-130		
1,1-Dichloroethene	19.3		µg/l		20.0		96	70-130		
cis-1,2-Dichloroethene	19.4		µg/l		20.0		97	70-130		
trans-1,2-Dichloroethene	19.0		µg/l		20.0		95	70-130		
1,2-Dichloropropane	18.2		µg/l		20.0		91	70-130		
cis-1,3-Dichloropropene	16.0		µg/l		20.0		80	70-130		
trans-1,3-Dichloropropene	14.3		µg/l		20.0		71	70-130		
Ethylbenzene	19.0		µg/l		20.0		95	70-130		
2-Hexanone (MBK)	14.0		µg/l		20.0		70	70-130		
Isopropylbenzene	19.9		µg/l		20.0		99	70-130		
Methyl tert-butyl ether	16.6		µg/l		20.0		83	70-130		
4-Methyl-2-pentanone (MIBK)	14.5		µg/l		20.0		73	70-130		
Methylene chloride	18.4		µg/l		20.0		92	70-130		
Styrene	19.4		µg/l		20.0		97	70-130		
1,1,2,2-Tetrachloroethane	19.1		µg/l		20.0		96	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1716757 - SW846 5030 Water MS										
<u>LCS (1716757-BS1)</u>					<u>Prepared & Analyzed: 02-Oct-17</u>					
Tetrachloroethene	20.2		µg/l		20.0		101	70-130		
Toluene	18.8		µg/l		20.0		94	70-130		
1,2,4-Trichlorobenzene	19.1		µg/l		20.0		95	70-130		
1,1,1-Trichloroethane	16.4		µg/l		20.0		82	70-130		
1,1,2-Trichloroethane	19.5		µg/l		20.0		98	70-130		
Trichloroethene	18.5		µg/l		20.0		92	70-130		
Vinyl chloride	19.0		µg/l		20.0		95	70-130		
Cyclohexane	17.1		µg/l		20.0		86	70-130		
Methyl acetate	12.6		µg/l		20.0		63	70-130		
Methylcyclohexane	17.7		µg/l		20.0		89	70-130		
Surrogate: 4-Bromofluorobenzene	50.8		µg/l		50.0		102	70-130		
Surrogate: Toluene-d8	51.0		µg/l		50.0		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	46.4		µg/l		50.0		93	70-130		
Surrogate: Dibromofluoromethane	50.3		µg/l		50.0		101	70-130		
<u>LCS Dup (1716757-BSD1)</u>					<u>Prepared & Analyzed: 02-Oct-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	19.5		µg/l		20.0		97	70-130	4	20
Acetone	16.7		µg/l		20.0		84	70-130	0.06	20
Benzene	17.6		µg/l		20.0		88	70-130	8	20
Bromodichloromethane	18.2		µg/l		20.0		91	70-130	0.8	20
Bromoform	19.1		µg/l		20.0		96	70-130	2	20
Bromomethane	16.7		µg/l		20.0		84	70-130	7	20
2-Butanone (MEK)	18.0		µg/l		20.0		90	70-130	4	20
Carbon disulfide	24.4	QR2	µg/l		20.0		122	70-130	32	20
Carbon tetrachloride	13.5	QM9	µg/l		20.0		68	70-130	4	20
Chlorobenzene	19.7		µg/l		20.0		98	70-130	5	20
Chloroethane	16.6		µg/l		20.0		83	70-130	7	20
Chloroform	17.7		µg/l		20.0		89	70-130	5	20
Chloromethane	16.5		µg/l		20.0		82	70-130	4	20
1,2-Dibromo-3-chloropropane	13.7	QC2	µg/l		20.0		69	70-130	2	20
Dibromochloromethane	17.3		µg/l		20.0		86	70-130	5	20
1,2-Dibromoethane (EDB)	18.3		µg/l		20.0		92	70-130	4	20
1,2-Dichlorobenzene	18.8		µg/l		20.0		94	70-130	4	20
1,3-Dichlorobenzene	20.5		µg/l		20.0		103	70-130	4	20
1,4-Dichlorobenzene	18.2		µg/l		20.0		91	70-130	4	20
Dichlorodifluoromethane (Freon12)	19.0		µg/l		20.0		95	70-130	7	20
1,1-Dichloroethane	17.6		µg/l		20.0		88	70-130	3	20
1,2-Dichloroethane	18.3		µg/l		20.0		92	70-130	1	20
1,1-Dichloroethene	18.2		µg/l		20.0		91	70-130	6	20
cis-1,2-Dichloroethene	18.7		µg/l		20.0		93	70-130	4	20
trans-1,2-Dichloroethene	18.1		µg/l		20.0		90	70-130	5	20
1,2-Dichloropropane	17.9		µg/l		20.0		90	70-130	2	20
cis-1,3-Dichloropropene	15.7		µg/l		20.0		78	70-130	2	20
trans-1,3-Dichloropropene	14.1		µg/l		20.0		71	70-130	1	20
Ethylbenzene	18.0		µg/l		20.0		90	70-130	6	20
2-Hexanone (MBK)	13.6		µg/l		20.0		68	70-130	3	20
Isopropylbenzene	18.5		µg/l		20.0		92	70-130	7	20
Methyl tert-butyl ether	16.6		µg/l		20.0		83	70-130	0.3	20
4-Methyl-2-pentanone (MIBK)	14.3		µg/l		20.0		71	70-130	2	20
Methylene chloride	18.8		µg/l		20.0		94	70-130	2	20
Styrene	18.4		µg/l		20.0		92	70-130	6	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
<u>SW846 8260C</u>										
Batch 1716757 - SW846 5030 Water MS										
<u>LCS Dup (1716757-BSD1)</u>					<u>Prepared & Analyzed: 02-Oct-17</u>					
1,1,2,2-Tetrachloroethane	19.3		µg/l		20.0		97	70-130	1	20
Tetrachloroethene	19.0		µg/l		20.0		95	70-130	6	20
Toluene	17.8		µg/l		20.0		89	70-130	5	20
1,2,4-Trichlorobenzene	18.0		µg/l		20.0		90	70-130	6	20
1,1,1-Trichloroethane	15.4		µg/l		20.0		77	70-130	6	20
1,1,2-Trichloroethane	19.0		µg/l		20.0		95	70-130	3	20
Trichloroethene	17.6		µg/l		20.0		88	70-130	5	20
Vinyl chloride	17.4		µg/l		20.0		87	70-130	9	20
Cyclohexane	15.9		µg/l		20.0		80	70-130	7	30
Methyl acetate	14.4		µg/l		20.0		72	70-130	14	30
Methylcyclohexane	16.4		µg/l		20.0		82	70-130	8	30
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>52.0</i>		<i>µg/l</i>		<i>50.0</i>		<i>104</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>51.0</i>		<i>µg/l</i>		<i>50.0</i>		<i>102</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>47.0</i>		<i>µg/l</i>		<i>50.0</i>		<i>94</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>50.5</i>		<i>µg/l</i>		<i>50.0</i>		<i>101</i>	<i>70-130</i>		

Notes and Definitions

D	Data reported from a dilution
E	This flag indicates the concentration for this analyte is an estimated value due to exceeding the calibration range or interferences resulting in a biased final concentration.
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QM10	LCS/LCSD were analyzed in place of MS/MSD.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.



Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

☒ Standard TAT - 7 to 10 business days☐ Rush TAT - Date Needed: _____All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
* Samples disposed after 30 days unless otherwise instructed.

Report To:

E & E, Inc
368 Pleasantview Dr
Leicester, NY 14086

Invoice To:

E & E, Inc

Project No:

Site Name:

Mr CG on 2M

Location:

East AuroraState: NY

Telephone #:

(716) 684-8060
Mike Steffen

P.O. No.:

Quote #:

Sampler(s):

R. AlterF=Field Filtered 1=Na₂SO₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid
7=CH₃OH 8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= _____ 12= _____

List Preservative Code below:

QA/QC Reporting Notes:
* additional charges may apply

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water

O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas

X1= _____ X2= _____ X3= _____

G=Grab

C=Compsite

Lab ID:

Sample ID:

Date:

Time:

Type

Matrix

of VOA Vials

of Amber Glass

of Clear Glass

of Plastic

Containers

Analysis

Check if chlorinated

MA DEP MCT CAM Report? ☐ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ ASP A* ☐ ASP B* ☐ ASP Full*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
Other: CAT A
State specific reporting standards: _____

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ORIGIN ID:DKKA (716) 662-4157
DHARMA IYER
IYER ENVIRONMENTAL GROUP PLLC
44 ROLLING HILLS DR

ORCHARD PARK, NY 14127
UNITED STATES US

SHIP DATE: 18SEP17
ACTWGT: 16.00 LB
CAD: 1286294/INET3920
DIMS: 10x12x14 IN

BILL RECIPIENT

TO **AGNUS HUNTLEY - SAMPLE RECEIPT**
EUROFINS SPECTRUM ANALYTICAL
11 ALGREN DRIVE

AGAWAM MA 01001

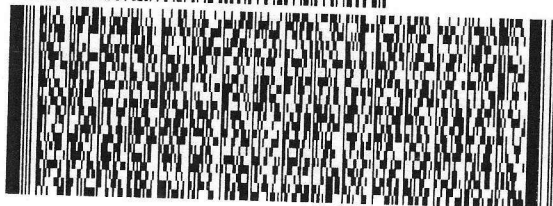
(413) 789-9018

REF MR Q'S

INV

PO

DEPT



FedEx
Express



J1721170813010r

TUE - 19 SEP 3:00P

TRK#
0201

7702 8291 3348

STANDARD OVERNIGHT

EB EHTA

01001

MA-US

BDL



FedEx Ship Manager - Print Your Label(s)

3/2017

After printing this label:

RT **744**
ST **17**

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15:00

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3348
09.19

Batch Summary

1716429

Volatile Organic Compounds

1716429-BLK1
1716429-BS1
1716429-BSD1
1716429-MS1
1716429-MSD1
SC39417-02 (Effluent)
SC39417-03 (PW-4)
SC39417-04 (PW-5)
SC39417-05 (PW-6)
SC39417-07 (PW-8)
SC39417-08 (TB)

1716519

Volatile Organic Compounds

1716519-BLK1
1716519-BS1
1716519-BSD1
SC39417-01RE1 (Influent)

1716757

Volatile Organic Compounds

1716757-BLK1
1716757-BS1
1716757-BSD1
SC39417-06 (PW-7)
SC39417-07RE1 (PW-8)

S708366

Volatile Organic Compounds

S708366-CAL1
S708366-CAL2
S708366-CAL3
S708366-CAL4
S708366-CAL5
S708366-CAL6
S708366-CAL7
S708366-CAL8
S708366-CAL9
S708366-CALA
S708366-CALB
S708366-ICV1
S708366-LCV1
S708366-LCV2
S708366-TUN1

S708539

Volatile Organic Compounds

S708539-CCV1
S708539-TUN1

S708577

Volatile Organic Compounds

S708577-CCV1
S708577-TUN1

S708603

Volatile Organic Compounds

S708603-CAL1
S708603-CAL2
S708603-CAL3
S708603-CAL4
S708603-CAL5
S708603-CAL6
S708603-CAL7
S708603-CAL8
S708603-CAL9
S708603-CALA
S708603-CALB
S708603-ICV1
S708603-LCV1
S708603-LCV2
S708603-TUN1

S708692

Volatile Organic Compounds

S708692-CCV1
S708692-TUN1

Report Date:
17-Nov-17 16:27**Laboratory Report**
SC41366Ecology and Environment, Inc.
368 Pleasant View Drive
Lancaster, NY 14086
Attn: Mike SteffanProject: Mr. C's - East Aurora, NY
Project #: [none]

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393Authorized by:
Rebecca Merz
Quality Services Manager

Eurofins Spectrum Analytical holds primary NELAC certification in the State of New York for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of New York does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.

Please note that this report contains 26 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our Quality web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis is transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC41366
Project: Mr. C's - East Aurora, NY
Project Number: [none]

<u>Laboratory ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Sampled</u>	<u>Date Received</u>
SC41366-01	PW-4	Ground Water	09-Nov-17 09:30	10-Nov-17 10:27
SC41366-02	PW-5	Ground Water	09-Nov-17 10:00	10-Nov-17 10:27
SC41366-03	PW-6	Ground Water	09-Nov-17 10:30	10-Nov-17 10:27
SC41366-04	PW-7	Ground Water	09-Nov-17 11:00	10-Nov-17 10:27
SC41366-05	PW-8	Ground Water	09-Nov-17 11:30	10-Nov-17 10:27

CASE NARRATIVE:

Data has been reported to the RDL. This report includes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the detection limit are reported as "<" (less than) the detection limit in this report.

The samples were received 5.8 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

SW846 8260C

Calibration:

1711018

Analyte quantified by quadratic equation type calibration.

2-Hexanone (MBK)
Vinyl chloride

This affected the following samples:

1719220-BLK1
1719220-BS1
1719220-BSD1
1719220-MS1
1719220-MSD1
1719281-BLK1
1719281-BS1
1719281-BSD1
PW-4
PW-5
PW-6
PW-7
PW-8
S709964-ICV1
S710043-CCV1
S710091-CCV1

Samples:

S710043-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,2,4-Trichlorobenzene (-22.1%)
1,2-Dibromo-3-chloropropane (-26.7%)
Bromoform (-27.6%)
Carbon tetrachloride (-26.1%)

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

Chloromethane (22.0%)

SW846 8260C

Samples:

S710043-CCV1

This affected the following samples:

1719220-BLK1
1719220-BS1
1719220-BSD1
1719220-MS1
1719220-MSD1
PW-4
PW-5
PW-6
PW-7

S710091-CCV1

Analyte percent difference is outside individual acceptance criteria (20), but within overall method allowances.

1,2-Dibromo-3-chloropropane (-24.9%)
Bromoform (-27.9%)
Carbon tetrachloride (-24.9%)

This affected the following samples:

1719281-BLK1
1719281-BS1
1719281-BSD1
PW-8

SC41366-01 *PW-4*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC41366-02 *PW-5*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC41366-03 *PW-6*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC41366-04 *PW-7*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

SC41366-05 *PW-8*

Sample dilution required for high concentration of target analytes to be within the instrument calibration range.

Sample Acceptance Check Form

Client: Ecology and Environment, Inc.
Project: Mr. C's - East Aurora, NY / [none]
Work Order: SC41366
Sample(s) received on: 11/10/2017

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	<u>Yes</u>	<u>No</u>	<u>N/A</u>
Were custody seals present?	☒	☐	☐
Were custody seals intact?	☒	☐	☐
Were samples received at a temperature of $\leq 6^{\circ}\text{C}$?	☒	☐	☐
Were samples cooled on ice upon transfer to laboratory representative?	☒	☐	☐
Were sample containers received intact?	☒	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☒	☐	☐
Were samples accompanied by a Chain of Custody document?	☒	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☒	☐	☐
Did sample container labels agree with Chain of Custody document?	☒	☐	☐
Were samples received within method-specific holding times?	☒	☐	☐

Summary of Hits

Lab ID: SC41366-01

Client ID: PW-4

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	142	D	50.0	µg/l	SW846 8260C
Tetrachloroethene	1990	D	50.0	µg/l	SW846 8260C
Trichloroethene	180	D	50.0	µg/l	SW846 8260C

Lab ID: SC41366-02

Client ID: PW-5

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	37.5	J, D	50.0	µg/l	SW846 8260C
Tetrachloroethene	3070	D	50.0	µg/l	SW846 8260C
Trichloroethene	88.5	D	50.0	µg/l	SW846 8260C

Lab ID: SC41366-03

Client ID: PW-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	277	D	100	µg/l	SW846 8260C
Tetrachloroethene	3650	D	100	µg/l	SW846 8260C
Trichloroethene	181	D	100	µg/l	SW846 8260C

Lab ID: SC41366-04

Client ID: PW-7

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	8560	D	100	µg/l	SW846 8260C
Tetrachloroethene	3370	D	100	µg/l	SW846 8260C
trans-1,2-Dichloroethene	39.0	J, D	100	µg/l	SW846 8260C
Trichloroethene	886	D	100	µg/l	SW846 8260C
Vinyl chloride	603	D	100	µg/l	SW846 8260C

Lab ID: SC41366-05

Client ID: PW-8

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
cis-1,2-Dichloroethene	574	D	10.0	µg/l	SW846 8260C
Methyl tert-butyl ether	6.30	J, D	10.0	µg/l	SW846 8260C
Tetrachloroethene	99.2	D	10.0	µg/l	SW846 8260C
Trichloroethene	8.70	J, D	10.0	µg/l	SW846 8260C
Vinyl chloride	164	D	10.0	µg/l	SW846 8260C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification

PW-4

SC41366-01

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 09:30

Received

10-Nov-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	142	D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	1,990	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	180	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-4

SC41366-01

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 09:30

Received

10-Nov-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 50.0	U, D	µg/l	50.0	23.6	50	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
1330-20-7	Total Xylenes	< 150	U, D	µg/l	150	150	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	86			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	99			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	112			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	117			70-130 %			"	"	"	"	"	

Sample Identification

PW-5

SC41366-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 10:00

Received

10-Nov-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 50.0	U, D	µg/l	50.0	26.6	50	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
67-64-1	Acetone	< 500	U, D	µg/l	500	40.2	50	"	"	"	"	"	X
71-43-2	Benzene	< 50.0	U, D	µg/l	50.0	14.2	50	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 25.0	U, D	µg/l	25.0	20.8	50	"	"	"	"	"	X
75-25-2	Bromoform	< 50.0	U, D	µg/l	50.0	21.2	50	"	"	"	"	"	X
74-83-9	Bromomethane	< 100	U, D	µg/l	100	44.8	50	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 100	U, D	µg/l	100	53.5	50	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 100	U, D	µg/l	100	20.6	50	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 50.0	U, D	µg/l	50.0	21.8	50	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 50.0	U, D	µg/l	50.0	12.4	50	"	"	"	"	"	X
75-00-3	Chloroethane	< 100	U, D	µg/l	100	29.4	50	"	"	"	"	"	X
67-66-3	Chloroform	< 50.0	U, D	µg/l	50.0	16.3	50	"	"	"	"	"	X
74-87-3	Chloromethane	< 100	U, D	µg/l	100	18.4	50	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 100	U, D	µg/l	100	43.2	50	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 25.0	U, D	µg/l	25.0	15.8	50	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 25.0	U, D	µg/l	25.0	10.1	50	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	15.7	50	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 50.0	U, D	µg/l	50.0	13.6	50	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 100	U, D	µg/l	100	29.2	50	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 50.0	U, D	µg/l	50.0	16.2	50	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 50.0	U, D	µg/l	50.0	13.8	50	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 50.0	U, D	µg/l	50.0	34.6	50	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	37.5	J, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 50.0	U, D	µg/l	50.0	18.8	50	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 50.0	U, D	µg/l	50.0	14.6	50	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	18.0	50	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 25.0	U, D	µg/l	25.0	17.4	50	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 50.0	U, D	µg/l	50.0	16.4	50	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 100	U, D	µg/l	100	26.4	50	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 50.0	U, D	µg/l	50.0	18.0	50	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 50.0	U, D	µg/l	50.0	11.8	50	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 100	U, D	µg/l	100	25.8	50	"	"	"	"	"	X
75-09-2	Methylene chloride	< 100	U, D	µg/l	100	33.0	50	"	"	"	"	"	X
100-42-5	Styrene	< 50.0	U, D	µg/l	50.0	20.2	50	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 25.0	U, D	µg/l	25.0	16.5	50	"	"	"	"	"	X
127-18-4	Tetrachloroethene	3,070	D	µg/l	50.0	28.5	50	"	"	"	"	"	X
108-88-3	Toluene	< 50.0	U, D	µg/l	50.0	15.0	50	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 50.0	U, D	µg/l	50.0	18.9	50	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 50.0	U, D	µg/l	50.0	25.4	50	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 50.0	U, D	µg/l	50.0	16.5	50	"	"	"	"	"	X
79-01-6	Trichloroethene	88.5	D	µg/l	50.0	24.8	50	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-5

SC41366-02

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 10:00

Received

10-Nov-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 50.0	U, D	µg/l	50.0	23.6	50	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
1330-20-7	Total Xylenes	< 150	U, D	µg/l	150	150	50	"	"	"	"	"	X
110-82-7	Cyclohexane	< 250	U, D	µg/l	250	39.4	50	"	"	"	"	"	X
79-20-9	Methyl acetate	< 250	U, D	µg/l	250	32.4	50	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 250	U, D	µg/l	250	37.1	50	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	84			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	100			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	112			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	108			70-130 %			"	"	"	"	"	

Sample Identification

PW-6

SC41366-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 10:30

Received

10-Nov-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	277	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 100	U, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	3,650	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	181	D	µg/l	100	49.7	100	"	"	"	"	"	X

This laboratory report is not valid without an authorized signature on the cover page.

Sample Identification

PW-6

SC41366-03

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 10:30

Received

10-Nov-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	< 100	U, D	µg/l	100	47.2	100	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
1330-20-7	Total Xylenes	< 300	U, D	µg/l	300	300	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	86			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	100			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	114			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	114			70-130 %			"	"	"	"	"	

Sample Identification

PW-7

SC41366-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 11:00

Received

10-Nov-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 100	U, D	µg/l	100	53.2	100	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
67-64-1	Acetone	< 1000	U, D	µg/l	1000	80.4	100	"	"	"	"	"	X
71-43-2	Benzene	< 100	U, D	µg/l	100	28.4	100	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 50.0	U, D	µg/l	50.0	41.7	100	"	"	"	"	"	X
75-25-2	Bromoform	< 100	U, D	µg/l	100	42.5	100	"	"	"	"	"	X
74-83-9	Bromomethane	< 200	U, D	µg/l	200	89.6	100	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 200	U, D	µg/l	200	107	100	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 200	U, D	µg/l	200	41.2	100	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 100	U, D	µg/l	100	43.7	100	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 100	U, D	µg/l	100	24.9	100	"	"	"	"	"	X
75-00-3	Chloroethane	< 200	U, D	µg/l	200	58.8	100	"	"	"	"	"	X
67-66-3	Chloroform	< 100	U, D	µg/l	100	32.6	100	"	"	"	"	"	X
74-87-3	Chloromethane	< 200	U, D	µg/l	200	36.8	100	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 200	U, D	µg/l	200	86.3	100	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 50.0	U, D	µg/l	50.0	31.7	100	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 50.0	U, D	µg/l	50.0	20.2	100	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 100	U, D	µg/l	100	31.4	100	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 100	U, D	µg/l	100	27.2	100	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 200	U, D	µg/l	200	58.4	100	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 100	U, D	µg/l	100	32.3	100	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 100	U, D	µg/l	100	27.7	100	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 100	U, D	µg/l	100	69.3	100	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	8,560	D	µg/l	100	32.7	100	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	39.0	J, D	µg/l	100	37.7	100	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 100	U, D	µg/l	100	29.2	100	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	35.9	100	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 50.0	U, D	µg/l	50.0	34.7	100	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 100	U, D	µg/l	100	32.9	100	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 200	U, D	µg/l	200	52.8	100	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 100	U, D	µg/l	100	36.0	100	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	< 100	U, D	µg/l	100	23.7	100	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 200	U, D	µg/l	200	51.5	100	"	"	"	"	"	X
75-09-2	Methylene chloride	< 200	U, D	µg/l	200	66.1	100	"	"	"	"	"	X
100-42-5	Styrene	< 100	U, D	µg/l	100	40.5	100	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 50.0	U, D	µg/l	50.0	33.0	100	"	"	"	"	"	X
127-18-4	Tetrachloroethene	3,370	D	µg/l	100	57.0	100	"	"	"	"	"	X
108-88-3	Toluene	< 100	U, D	µg/l	100	29.9	100	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 100	U, D	µg/l	100	37.8	100	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 100	U, D	µg/l	100	50.9	100	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 100	U, D	µg/l	100	33.0	100	"	"	"	"	"	X
79-01-6	Trichloroethene	886	D	µg/l	100	49.7	100	"	"	"	"	"	X

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Sample Identification

PW-7

SC41366-04

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 11:00

Received

10-Nov-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	603	D	µg/l	100	47.2	100	SW846 8260C	14-Nov-17	15-Nov-17	GMA	1719220	X
1330-20-7	Total Xylenes	< 300	U, D	µg/l	300	300	100	"	"	"	"	"	X
110-82-7	Cyclohexane	< 500	U, D	µg/l	500	78.7	100	"	"	"	"	"	X
79-20-9	Methyl acetate	< 500	U, D	µg/l	500	64.7	100	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 500	U, D	µg/l	500	74.2	100	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	85			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	98			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	112			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	103			70-130 %			"	"	"	"	"	

Sample Identification

PW-8

SC41366-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 11:30

Received

10-Nov-17

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Volatile Organic Compounds													
Volatile Organic Compounds by SW846 8260			GS1										
Prepared by method SW846 5030 Water MS													
76-13-1	1,1,2-Trichlorotrifluoroethane (Freon 113)	< 10.0	U, D	µg/l	10.0	5.32	10	SW846 8260C	15-Nov-17	15-Nov-17	GMA	1719281	X
67-64-1	Acetone	< 100	U, D	µg/l	100	8.04	10	"	"	"	"	"	X
71-43-2	Benzene	< 10.0	U, D	µg/l	10.0	2.84	10	"	"	"	"	"	X
75-27-4	Bromodichloromethane	< 5.00	U, D	µg/l	5.00	4.17	10	"	"	"	"	"	X
75-25-2	Bromoform	< 10.0	U, D	µg/l	10.0	4.25	10	"	"	"	"	"	X
74-83-9	Bromomethane	< 20.0	U, D	µg/l	20.0	8.96	10	"	"	"	"	"	X
78-93-3	2-Butanone (MEK)	< 20.0	U, D	µg/l	20.0	10.7	10	"	"	"	"	"	X
75-15-0	Carbon disulfide	< 20.0	U, D	µg/l	20.0	4.12	10	"	"	"	"	"	X
56-23-5	Carbon tetrachloride	< 10.0	U, D	µg/l	10.0	4.37	10	"	"	"	"	"	X
108-90-7	Chlorobenzene	< 10.0	U, D	µg/l	10.0	2.49	10	"	"	"	"	"	X
75-00-3	Chloroethane	< 20.0	U, D	µg/l	20.0	5.88	10	"	"	"	"	"	X
67-66-3	Chloroform	< 10.0	U, D	µg/l	10.0	3.26	10	"	"	"	"	"	X
74-87-3	Chloromethane	< 20.0	U, D	µg/l	20.0	3.68	10	"	"	"	"	"	X
96-12-8	1,2-Dibromo-3-chloropropane	< 20.0	U, D	µg/l	20.0	8.63	10	"	"	"	"	"	X
124-48-1	Dibromochloromethane	< 5.00	U, D	µg/l	5.00	3.17	10	"	"	"	"	"	X
106-93-4	1,2-Dibromoethane (EDB)	< 5.00	U, D	µg/l	5.00	2.02	10	"	"	"	"	"	X
95-50-1	1,2-Dichlorobenzene	< 10.0	U, D	µg/l	10.0	2.77	10	"	"	"	"	"	X
541-73-1	1,3-Dichlorobenzene	< 10.0	U, D	µg/l	10.0	3.14	10	"	"	"	"	"	X
106-46-7	1,4-Dichlorobenzene	< 10.0	U, D	µg/l	10.0	2.72	10	"	"	"	"	"	X
75-71-8	Dichlorodifluoromethane (Freon12)	< 20.0	U, D	µg/l	20.0	5.84	10	"	"	"	"	"	X
75-34-3	1,1-Dichloroethane	< 10.0	U, D	µg/l	10.0	3.23	10	"	"	"	"	"	X
107-06-2	1,2-Dichloroethane	< 10.0	U, D	µg/l	10.0	2.77	10	"	"	"	"	"	X
75-35-4	1,1-Dichloroethene	< 10.0	U, D	µg/l	10.0	6.93	10	"	"	"	"	"	X
156-59-2	cis-1,2-Dichloroethene	574	D	µg/l	10.0	3.27	10	"	"	"	"	"	X
156-60-5	trans-1,2-Dichloroethene	< 10.0	U, D	µg/l	10.0	3.77	10	"	"	"	"	"	X
78-87-5	1,2-Dichloropropane	< 10.0	U, D	µg/l	10.0	2.92	10	"	"	"	"	"	X
10061-01-5	cis-1,3-Dichloropropene	< 5.00	U, D	µg/l	5.00	3.59	10	"	"	"	"	"	X
10061-02-6	trans-1,3-Dichloropropene	< 5.00	U, D	µg/l	5.00	3.47	10	"	"	"	"	"	X
100-41-4	Ethylbenzene	< 10.0	U, D	µg/l	10.0	3.29	10	"	"	"	"	"	X
591-78-6	2-Hexanone (MBK)	< 20.0	U, D	µg/l	20.0	5.28	10	"	"	"	"	"	X
98-82-8	Isopropylbenzene	< 10.0	U, D	µg/l	10.0	3.60	10	"	"	"	"	"	X
1634-04-4	Methyl tert-butyl ether	6.30	J, D	µg/l	10.0	2.37	10	"	"	"	"	"	X
108-10-1	4-Methyl-2-pentanone (MIBK)	< 20.0	U, D	µg/l	20.0	5.15	10	"	"	"	"	"	X
75-09-2	Methylene chloride	< 20.0	U, D	µg/l	20.0	6.61	10	"	"	"	"	"	X
100-42-5	Styrene	< 10.0	U, D	µg/l	10.0	4.05	10	"	"	"	"	"	X
79-34-5	1,1,2,2-Tetrachloroethane	< 5.00	U, D	µg/l	5.00	3.30	10	"	"	"	"	"	X
127-18-4	Tetrachloroethene	99.2	D	µg/l	10.0	5.70	10	"	"	"	"	"	X
108-88-3	Toluene	< 10.0	U, D	µg/l	10.0	2.99	10	"	"	"	"	"	X
120-82-1	1,2,4-Trichlorobenzene	< 10.0	U, D	µg/l	10.0	3.78	10	"	"	"	"	"	X
71-55-6	1,1,1-Trichloroethane	< 10.0	U, D	µg/l	10.0	5.09	10	"	"	"	"	"	X
79-00-5	1,1,2-Trichloroethane	< 10.0	U, D	µg/l	10.0	3.30	10	"	"	"	"	"	X
79-01-6	Trichloroethene	8.70	J, D	µg/l	10.0	4.97	10	"	"	"	"	"	X

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Sample Identification

PW-8

SC41366-05

Client Project #

[none]

Matrix

Ground Water

Collection Date/Time

09-Nov-17 11:30

Received

10-Nov-17

<i>CAS No.</i>	<i>Analyte(s)</i>	<i>Result</i>	<i>Flag</i>	<i>Units</i>	<i>*RDL</i>	<i>MDL</i>	<i>Dilution</i>	<i>Method Ref.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Analyst</i>	<i>Batch</i>	<i>Cert.</i>
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Volatile Organic CompoundsVolatile Organic Compounds by SW846 8260

GS1

75-01-4	Vinyl chloride	164	D	µg/l	10.0	4.72	10	SW846 8260C	15-Nov-17	15-Nov-17	GMA	1719281	X
1330-20-7	Total Xylenes	< 30.0	U, D	µg/l	30.0	30.0	10	"	"	"	"	"	X
110-82-7	Cyclohexane	< 50.0	U, D	µg/l	50.0	7.87	10	"	"	"	"	"	X
79-20-9	Methyl acetate	< 50.0	U, D	µg/l	50.0	6.47	10	"	"	"	"	"	X
108-87-2	Methylcyclohexane	< 50.0	U, D	µg/l	50.0	7.42	10	"	"	"	"	"	X

Surrogate recoveries:

460-00-4	4-Bromofluorobenzene	88			70-130 %			"	"	"	"	"	
2037-26-5	Toluene-d8	100			70-130 %			"	"	"	"	"	
17060-07-0	1,2-Dichloroethane-d4	115			70-130 %			"	"	"	"	"	
1868-53-7	Dibromofluoromethane	122			70-130 %			"	"	"	"	"	

Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719220 - SW846 5030 Water MS										
Blank (1719220-BLK1)					<u>Prepared & Analyzed: 14-Nov-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						
Total Xylenes	< 3.00	U	µg/l	3.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
Surrogate: 4-Bromofluorobenzene	44.0		µg/l		50.0		88	70-130		
Surrogate: Toluene-d8	50.7		µg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	57.7		µg/l		50.0		115	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719220 - SW846 5030 Water MS										
Blank (1719220-BLK1)					Prepared & Analyzed: 14-Nov-17					
Surrogate: Dibromofluoromethane	53.3		µg/l		50.0		107	70-130		
LCS (1719220-BS1)					Prepared & Analyzed: 14-Nov-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	23.3		µg/l		20.0		116	70-130		
Acetone	22.1		µg/l		20.0		111	70-130		
Benzene	21.6		µg/l		20.0		108	70-130		
Bromodichloromethane	19.4		µg/l		20.0		97	70-130		
Bromoform	14.8		µg/l		20.0		74	70-130		
Bromomethane	21.9		µg/l		20.0		109	70-130		
2-Butanone (MEK)	18.3		µg/l		20.0		92	70-130		
Carbon disulfide	18.0		µg/l		20.0		90	70-130		
Carbon tetrachloride	16.0		µg/l		20.0		80	70-130		
Chlorobenzene	20.5		µg/l		20.0		103	70-130		
Chloroethane	19.9		µg/l		20.0		100	70-130		
Chloroform	22.0		µg/l		20.0		110	70-130		
Chloromethane	24.9		µg/l		20.0		125	70-130		
1,2-Dibromo-3-chloropropane	15.6		µg/l		20.0		78	70-130		
Dibromochloromethane	17.6		µg/l		20.0		88	70-130		
1,2-Dibromoethane (EDB)	21.8		µg/l		20.0		109	70-130		
1,2-Dichlorobenzene	19.7		µg/l		20.0		99	70-130		
1,3-Dichlorobenzene	20.9		µg/l		20.0		105	70-130		
1,4-Dichlorobenzene	21.0		µg/l		20.0		105	70-130		
Dichlorodifluoromethane (Freon12)	23.2		µg/l		20.0		116	70-130		
1,1-Dichloroethane	21.7		µg/l		20.0		108	70-130		
1,2-Dichloroethane	22.5		µg/l		20.0		112	70-130		
1,1-Dichloroethene	22.1		µg/l		20.0		110	70-130		
cis-1,2-Dichloroethene	21.7		µg/l		20.0		109	70-130		
trans-1,2-Dichloroethene	20.4		µg/l		20.0		102	70-130		
1,2-Dichloropropane	21.3		µg/l		20.0		106	70-130		
cis-1,3-Dichloropropene	16.5		µg/l		20.0		82	70-130		
trans-1,3-Dichloropropene	16.3		µg/l		20.0		81	70-130		
Ethylbenzene	19.8		µg/l		20.0		99	70-130		
2-Hexanone (MBK)	17.5		µg/l		20.0		88	70-130		
Isopropylbenzene	19.9		µg/l		20.0		100	70-130		
Methyl tert-butyl ether	18.9		µg/l		20.0		94	70-130		
4-Methyl-2-pentanone (MIBK)	17.3		µg/l		20.0		87	70-130		
Methylene chloride	22.8		µg/l		20.0		114	70-130		
Styrene	18.0		µg/l		20.0		90	70-130		
1,1,2,2-Tetrachloroethane	21.1		µg/l		20.0		106	70-130		
Tetrachloroethene	20.7		µg/l		20.0		104	70-130		
Toluene	21.5		µg/l		20.0		108	70-130		
1,2,4-Trichlorobenzene	16.8		µg/l		20.0		84	70-130		
1,1,1-Trichloroethane	18.6		µg/l		20.0		93	70-130		
1,1,2-Trichloroethane	22.3		µg/l		20.0		111	70-130		
Trichloroethene	21.5		µg/l		20.0		108	70-130		
Vinyl chloride	22.4		µg/l		20.0		112	70-130		
Cyclohexane	19.6		µg/l		20.0		98	70-130		
Methyl acetate	20.7		µg/l		20.0		104	70-130		
Methylcyclohexane	19.1		µg/l		20.0		96	70-130		
Surrogate: 4-Bromofluorobenzene	49.9		µg/l		50.0		100	70-130		
Surrogate: Toluene-d8	50.2		µg/l		50.0		100	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719220 - SW846 5030 Water MS										
LCS (1719220-BS1)					Prepared & Analyzed: 14-Nov-17					
Surrogate: 1,2-Dichloroethane-d4	54.0		µg/l		50.0		108	70-130		
Surrogate: Dibromofluoromethane	50.9		µg/l		50.0		102	70-130		
LCS Dup (1719220-BSD1)					Prepared & Analyzed: 14-Nov-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.7		µg/l		20.0		109	70-130	7	20
Acetone	22.9		µg/l		20.0		115	70-130	4	20
Benzene	20.5		µg/l		20.0		103	70-130	5	20
Bromodichloromethane	18.6		µg/l		20.0		93	70-130	4	20
Bromoform	14.8		µg/l		20.0		74	70-130	0	20
Bromomethane	21.0		µg/l		20.0		105	70-130	4	20
2-Butanone (MEK)	18.8		µg/l		20.0		94	70-130	3	20
Carbon disulfide	17.0		µg/l		20.0		85	70-130	6	20
Carbon tetrachloride	14.3		µg/l		20.0		72	70-130	11	20
Chlorobenzene	19.6		µg/l		20.0		98	70-130	4	20
Chloroethane	18.9		µg/l		20.0		94	70-130	5	20
Chloroform	21.1		µg/l		20.0		105	70-130	5	20
Chloromethane	22.9		µg/l		20.0		114	70-130	9	20
1,2-Dibromo-3-chloropropane	16.3		µg/l		20.0		82	70-130	5	20
Dibromochloromethane	16.9		µg/l		20.0		84	70-130	4	20
1,2-Dibromoethane (EDB)	21.6		µg/l		20.0		108	70-130	0.9	20
1,2-Dichlorobenzene	19.8		µg/l		20.0		99	70-130	0.2	20
1,3-Dichlorobenzene	20.8		µg/l		20.0		104	70-130	0.7	20
1,4-Dichlorobenzene	19.9		µg/l		20.0		99	70-130	6	20
Dichlorodifluoromethane (Freon12)	22.0		µg/l		20.0		110	70-130	5	20
1,1-Dichloroethane	20.3		µg/l		20.0		101	70-130	7	20
1,2-Dichloroethane	21.7		µg/l		20.0		109	70-130	3	20
1,1-Dichloroethene	20.4		µg/l		20.0		102	70-130	8	20
cis-1,2-Dichloroethene	20.6		µg/l		20.0		103	70-130	5	20
trans-1,2-Dichloroethene	19.1		µg/l		20.0		95	70-130	7	20
1,2-Dichloropropane	20.0		µg/l		20.0		100	70-130	6	20
cis-1,3-Dichloropropene	16.2		µg/l		20.0		81	70-130	2	20
trans-1,3-Dichloropropene	16.1		µg/l		20.0		81	70-130	1	20
Ethylbenzene	18.7		µg/l		20.0		94	70-130	6	20
2-Hexanone (MBK)	18.2		µg/l		20.0		91	70-130	4	20
Isopropylbenzene	19.4		µg/l		20.0		97	70-130	3	20
Methyl tert-butyl ether	18.9		µg/l		20.0		95	70-130	0.3	20
4-Methyl-2-pentanone (MIBK)	18.8		µg/l		20.0		94	70-130	8	20
Methylene chloride	22.5		µg/l		20.0		113	70-130	1	20
Styrene	17.6		µg/l		20.0		88	70-130	2	20
1,1,2,2-Tetrachloroethane	21.3		µg/l		20.0		107	70-130	1	20
Tetrachloroethene	19.4		µg/l		20.0		97	70-130	7	20
Toluene	20.7		µg/l		20.0		103	70-130	4	20
1,2,4-Trichlorobenzene	17.2		µg/l		20.0		86	70-130	3	20
1,1,1-Trichloroethane	17.7		µg/l		20.0		88	70-130	5	20
1,1,2-Trichloroethane	22.3		µg/l		20.0		112	70-130	0.2	20
Trichloroethene	19.7		µg/l		20.0		99	70-130	9	20
Vinyl chloride	20.6		µg/l		20.0		103	70-130	9	20
Cyclohexane	18.5		µg/l		20.0		92	70-130	6	30
Methyl acetate	21.9		µg/l		20.0		110	70-130	6	30
Methylcyclohexane	17.1		µg/l		20.0		86	70-130	11	30
Surrogate: 4-Bromofluorobenzene	51.2		µg/l		50.0		102	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719220 - SW846 5030 Water MS										
LCS Dup (1719220-BSD1)					Prepared & Analyzed: 14-Nov-17					
Surrogate: Toluene-d8	50.3		µg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	54.3		µg/l		50.0		109	70-130		
Surrogate: Dibromofluoromethane	50.6		µg/l		50.0		101	70-130		
Matrix Spike (1719220-MS1)					Source: SC41366-01					
					Prepared & Analyzed: 14-Nov-17					
1,1,2-Trichlorotrifluoroethane (Freon 113)	23.0	D	µg/l		20.0	0.00	115	70-130		
Acetone	22.0	D	µg/l		20.0	0.00	110	70-130		
Benzene	21.9	D	µg/l		20.0	0.00	110	70-130		
Bromodichloromethane	19.4	D	µg/l		20.0	0.00	97	70-130		
Bromoform	15.2	D	µg/l		20.0	0.00	76	70-130		
Bromomethane	22.1	D	µg/l		20.0	0.00	110	70-130		
2-Butanone (MEK)	18.3	D	µg/l		20.0	0.00	92	70-130		
Carbon disulfide	17.9	D	µg/l		20.0	0.00	90	70-130		
Carbon tetrachloride	16.4	D	µg/l		20.0	0.00	82	70-130		
Chlorobenzene	20.8	D	µg/l		20.0	0.00	104	70-130		
Chloroethane	20.5	D	µg/l		20.0	0.00	102	70-130		
Chloroform	22.3	D	µg/l		20.0	0.00	111	70-130		
Chloromethane	24.4	D	µg/l		20.0	0.00	122	70-130		
1,2-Dibromo-3-chloropropane	16.5	D	µg/l		20.0	0.00	82	70-130		
Dibromochloromethane	17.7	D	µg/l		20.0	0.00	89	70-130		
1,2-Dibromoethane (EDB)	21.4	D	µg/l		20.0	0.00	107	70-130		
1,2-Dichlorobenzene	20.2	D	µg/l		20.0	0.00	101	70-130		
1,3-Dichlorobenzene	21.5	D	µg/l		20.0	0.00	107	70-130		
1,4-Dichlorobenzene	20.7	D	µg/l		20.0	0.00	104	70-130		
Dichlorodifluoromethane (Freon12)	22.6	D	µg/l		20.0	0.00	113	70-130		
1,1-Dichloroethane	21.5	D	µg/l		20.0	0.00	108	70-130		
1,2-Dichloroethane	21.8	D	µg/l		20.0	0.00	109	70-130		
1,1-Dichloroethene	21.8	D	µg/l		20.0	0.00	109	70-130		
cis-1,2-Dichloroethene	25.0	D	µg/l		20.0	2.84	111	70-130		
trans-1,2-Dichloroethene	20.2	D	µg/l		20.0	0.00	101	70-130		
1,2-Dichloropropane	21.2	D	µg/l		20.0	0.00	106	70-130		
cis-1,3-Dichloropropene	16.8	D	µg/l		20.0	0.00	84	70-130		
trans-1,3-Dichloropropene	16.3	D	µg/l		20.0	0.00	82	70-130		
Ethylbenzene	20.2	D	µg/l		20.0	0.00	101	70-130		
2-Hexanone (MBK)	17.6	D	µg/l		20.0	0.00	88	70-130		
Isopropylbenzene	20.7	D	µg/l		20.0	0.00	104	70-130		
Methyl tert-butyl ether	19.3	D	µg/l		20.0	0.00	96	70-130		
4-Methyl-2-pentanone (MIBK)	17.7	D	µg/l		20.0	0.00	89	70-130		
Methylene chloride	23.1	D	µg/l		20.0	0.00	116	70-130		
Styrene	19.0	D	µg/l		20.0	0.00	95	70-130		
1,1,2,2-Tetrachloroethane	21.4	D	µg/l		20.0	0.00	107	70-130		
Tetrachloroethene	64.3	D	µg/l		20.0	39.8	122	70-130		
Toluene	22.4	D	µg/l		20.0	0.00	112	70-130		
1,2,4-Trichlorobenzene	17.2	D	µg/l		20.0	0.00	86	70-130		
1,1,1-Trichloroethane	18.9	D	µg/l		20.0	0.00	94	70-130		
1,1,2-Trichloroethane	22.9	D	µg/l		20.0	0.00	114	70-130		
Trichloroethene	25.2	D	µg/l		20.0	3.60	108	70-130		
Vinyl chloride	21.6	D	µg/l		20.0	0.41	106	70-130		
Cyclohexane	19.5	D	µg/l		20.0	0.00	98	70-130		
Methyl acetate	25.1	D	µg/l		20.0	0.00	125	70-130		
Methylcyclohexane	19.0	D	µg/l		20.0	0.00	95	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719220 - SW846 5030 Water MS										
Matrix Spike (1719220-MS1)			Source: SC41366-01			Prepared & Analyzed: 14-Nov-17				
Surrogate: 4-Bromofluorobenzene	51.4		µg/l		50.0		103	70-130		
Surrogate: Toluene-d8	50.5		µg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	53.6		µg/l		50.0		107	70-130		
Surrogate: Dibromofluoromethane	59.4		µg/l		50.0		119	70-130		
Matrix Spike Dup (1719220-MSD1)			Source: SC41366-01			Prepared & Analyzed: 14-Nov-17				
1,1,2-Trichlorotrifluoroethane (Freon 113)	21.9	D	µg/l		20.0	0.00	110	70-130		20
Acetone	21.9	D	µg/l		20.0	0.00	109	70-130		20
Benzene	21.0	D	µg/l		20.0	0.00	105	70-130	4	20
Bromodichloromethane	18.1	D	µg/l		20.0	0.00	90	70-130		20
Bromoform	14.7	D	µg/l		20.0	0.00	74	70-130		20
Bromomethane	21.9	D	µg/l		20.0	0.00	110	70-130		20
2-Butanone (MEK)	18.3	D	µg/l		20.0	0.00	91	70-130		20
Carbon disulfide	16.8	D	µg/l		20.0	0.00	84	70-130		20
Carbon tetrachloride	15.0	D	µg/l		20.0	0.00	75	70-130		20
Chlorobenzene	20.0	D	µg/l		20.0	0.00	100	70-130	4	20
Chloroethane	19.0	D	µg/l		20.0	0.00	95	70-130		20
Chloroform	21.2	D	µg/l		20.0	0.00	106	70-130	5	20
Chloromethane	22.8	D	µg/l		20.0	0.00	114	70-130	7	20
1,2-Dibromo-3-chloropropane	15.5	D	µg/l		20.0	0.00	77	70-130		20
Dibromochloromethane	17.5	D	µg/l		20.0	0.00	87	70-130	1	20
1,2-Dibromoethane (EDB)	20.9	D	µg/l		20.0	0.00	104	70-130	3	20
1,2-Dichlorobenzene	19.5	D	µg/l		20.0	0.00	98	70-130	3	20
1,3-Dichlorobenzene	19.6	D	µg/l		20.0	0.00	98	70-130	9	20
1,4-Dichlorobenzene	20.5	D	µg/l		20.0	0.00	102	70-130	1	20
Dichlorodifluoromethane (Freon12)	21.1	D	µg/l		20.0	0.00	106	70-130		20
1,1-Dichloroethane	20.7	D	µg/l		20.0	0.00	104	70-130	4	20
1,2-Dichloroethane	21.6	D	µg/l		20.0	0.00	108	70-130	1	20
1,1-Dichloroethene	19.9	D	µg/l		20.0	0.00	100	70-130		20
cis-1,2-Dichloroethene	23.9	D	µg/l		20.0	2.84	105	70-130	4	20
trans-1,2-Dichloroethene	20.3	D	µg/l		20.0	0.00	102	70-130	0.8	20
1,2-Dichloropropane	20.6	D	µg/l		20.0	0.00	103	70-130	3	20
cis-1,3-Dichloropropene	16.4	D	µg/l		20.0	0.00	82	70-130		20
trans-1,3-Dichloropropene	16.1	D	µg/l		20.0	0.00	81	70-130		20
Ethylbenzene	19.1	D	µg/l		20.0	0.00	95	70-130	5	20
2-Hexanone (MBK)	16.7	D	µg/l		20.0	0.00	83	70-130		20
Isopropylbenzene	19.1	D	µg/l		20.0	0.00	95	70-130	8	20
Methyl tert-butyl ether	18.6	D	µg/l		20.0	0.00	93	70-130	3	20
4-Methyl-2-pentanone (MIBK)	16.8	D	µg/l		20.0	0.00	84	70-130		20
Methylene chloride	22.4	D	µg/l		20.0	0.00	112	70-130		20
Styrene	18.0	D	µg/l		20.0	0.00	90	70-130		20
1,1,2,2-Tetrachloroethane	20.7	D	µg/l		20.0	0.00	104	70-130	3	20
Tetrachloroethene	60.8	D	µg/l		20.0	39.8	105	70-130	5	20
Toluene	20.7	D	µg/l		20.0	0.00	104	70-130	8	20
1,2,4-Trichlorobenzene	16.5	D	µg/l		20.0	0.00	82	70-130		20
1,1,1-Trichloroethane	17.9	D	µg/l		20.0	0.00	90	70-130		20
1,1,2-Trichloroethane	22.8	D	µg/l		20.0	0.00	114	70-130	0.2	20
Trichloroethene	24.4	D	µg/l		20.0	3.60	104	70-130	3	20
Vinyl chloride	21.5	D	µg/l		20.0	0.41	106	70-130		20
Cyclohexane	18.6	D	µg/l		20.0	0.00	93	70-130		30
Methyl acetate	24.4	D	µg/l		20.0	0.00	122	70-130		30

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719220 - SW846 5030 Water MS										
Matrix Spike Dup (1719220-MSD1)				Source: SC41366-01				Prepared & Analyzed: 14-Nov-17		
Methylcyclohexane	18.0	D	µg/l		20.0	0.00	90	70-130		30
Surrogate: 4-Bromofluorobenzene	50.4		µg/l		50.0		101	70-130		
Surrogate: Toluene-d8	50.9		µg/l		50.0		102	70-130		
Surrogate: 1,2-Dichloroethane-d4	53.2		µg/l		50.0		106	70-130		
Surrogate: Dibromofluoromethane	58.7		µg/l		50.0		117	70-130		
Batch 1719281 - SW846 5030 Water MS										
Blank (1719281-BLK1)								Prepared & Analyzed: 15-Nov-17		
1,1,2-Trichlorotrifluoroethane (Freon 113)	< 1.00	U	µg/l	1.00						
Acetone	< 10.0	U	µg/l	10.0						
Benzene	< 1.00	U	µg/l	1.00						
Bromodichloromethane	< 0.50	U	µg/l	0.50						
Bromoform	< 1.00	U	µg/l	1.00						
Bromomethane	< 2.00	U	µg/l	2.00						
2-Butanone (MEK)	< 2.00	U	µg/l	2.00						
Carbon disulfide	< 2.00	U	µg/l	2.00						
Carbon tetrachloride	< 1.00	U	µg/l	1.00						
Chlorobenzene	< 1.00	U	µg/l	1.00						
Chloroethane	< 2.00	U	µg/l	2.00						
Chloroform	< 1.00	U	µg/l	1.00						
Chloromethane	< 2.00	U	µg/l	2.00						
1,2-Dibromo-3-chloropropane	< 2.00	U	µg/l	2.00						
Dibromochloromethane	< 0.50	U	µg/l	0.50						
1,2-Dibromoethane (EDB)	< 0.50	U	µg/l	0.50						
1,2-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,3-Dichlorobenzene	< 1.00	U	µg/l	1.00						
1,4-Dichlorobenzene	< 1.00	U	µg/l	1.00						
Dichlorodifluoromethane (Freon12)	< 2.00	U	µg/l	2.00						
1,1-Dichloroethane	< 1.00	U	µg/l	1.00						
1,2-Dichloroethane	< 1.00	U	µg/l	1.00						
1,1-Dichloroethene	< 1.00	U	µg/l	1.00						
cis-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
trans-1,2-Dichloroethene	< 1.00	U	µg/l	1.00						
1,2-Dichloropropane	< 1.00	U	µg/l	1.00						
cis-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
trans-1,3-Dichloropropene	< 0.50	U	µg/l	0.50						
Ethylbenzene	< 1.00	U	µg/l	1.00						
2-Hexanone (MBK)	< 2.00	U	µg/l	2.00						
Isopropylbenzene	< 1.00	U	µg/l	1.00						
Methyl tert-butyl ether	< 1.00	U	µg/l	1.00						
4-Methyl-2-pentanone (MIBK)	< 2.00	U	µg/l	2.00						
Methylene chloride	< 2.00	U	µg/l	2.00						
Styrene	< 1.00	U	µg/l	1.00						
1,1,2,2-Tetrachloroethane	< 0.50	U	µg/l	0.50						
Tetrachloroethene	< 1.00	U	µg/l	1.00						
Toluene	< 1.00	U	µg/l	1.00						
1,2,4-Trichlorobenzene	< 1.00	U	µg/l	1.00						
1,1,1-Trichloroethane	< 1.00	U	µg/l	1.00						
1,1,2-Trichloroethane	< 1.00	U	µg/l	1.00						
Trichloroethene	< 1.00	U	µg/l	1.00						
Vinyl chloride	< 1.00	U	µg/l	1.00						

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719281 - SW846 5030 Water MS										
Blank (1719281-BLK1)					<u>Prepared & Analyzed: 15-Nov-17</u>					
Total Xylenes	< 3.00	U	µg/l	3.00						
Cyclohexane	< 5.00	U	µg/l	5.00						
Methyl acetate	< 5.00	U	µg/l	5.00						
Methylcyclohexane	< 5.00	U	µg/l	5.00						
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>44.3</i>		<i>µg/l</i>		<i>50.0</i>		<i>89</i>	<i>70-130</i>		
<i>Surrogate: Toluene-d8</i>	<i>49.5</i>		<i>µg/l</i>		<i>50.0</i>		<i>99</i>	<i>70-130</i>		
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>55.4</i>		<i>µg/l</i>		<i>50.0</i>		<i>111</i>	<i>70-130</i>		
<i>Surrogate: Dibromofluoromethane</i>	<i>48.1</i>		<i>µg/l</i>		<i>50.0</i>		<i>96</i>	<i>70-130</i>		
LCS (1719281-BS1)					<u>Prepared & Analyzed: 15-Nov-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	23.1		µg/l		20.0		116	70-130		
Acetone	20.2		µg/l		20.0		101	70-130		
Benzene	20.9		µg/l		20.0		104	70-130		
Bromodichloromethane	18.2		µg/l		20.0		91	70-130		
Bromoform	14.4		µg/l		20.0		72	70-130		
Bromomethane	22.0		µg/l		20.0		110	70-130		
2-Butanone (MEK)	18.3		µg/l		20.0		92	70-130		
Carbon disulfide	17.5		µg/l		20.0		87	70-130		
Carbon tetrachloride	15.0		µg/l		20.0		75	70-130		
Chlorobenzene	19.6		µg/l		20.0		98	70-130		
Chloroethane	18.7		µg/l		20.0		94	70-130		
Chloroform	21.6		µg/l		20.0		108	70-130		
Chloromethane	23.9		µg/l		20.0		119	70-130		
1,2-Dibromo-3-chloropropane	15.0		µg/l		20.0		75	70-130		
Dibromochloromethane	16.8		µg/l		20.0		84	70-130		
1,2-Dibromoethane (EDB)	20.9		µg/l		20.0		105	70-130		
1,2-Dichlorobenzene	19.5		µg/l		20.0		98	70-130		
1,3-Dichlorobenzene	20.2		µg/l		20.0		101	70-130		
1,4-Dichlorobenzene	20.3		µg/l		20.0		102	70-130		
Dichlorodifluoromethane (Freon12)	22.6		µg/l		20.0		113	70-130		
1,1-Dichloroethane	21.1		µg/l		20.0		105	70-130		
1,2-Dichloroethane	22.0		µg/l		20.0		110	70-130		
1,1-Dichloroethene	21.2		µg/l		20.0		106	70-130		
cis-1,2-Dichloroethene	21.0		µg/l		20.0		105	70-130		
trans-1,2-Dichloroethene	20.2		µg/l		20.0		101	70-130		
1,2-Dichloropropane	20.2		µg/l		20.0		101	70-130		
cis-1,3-Dichloropropene	16.3		µg/l		20.0		82	70-130		
trans-1,3-Dichloropropene	16.4		µg/l		20.0		82	70-130		
Ethylbenzene	19.0		µg/l		20.0		95	70-130		
2-Hexanone (MBK)	17.2		µg/l		20.0		86	70-130		
Isopropylbenzene	19.6		µg/l		20.0		98	70-130		
Methyl tert-butyl ether	18.6		µg/l		20.0		93	70-130		
4-Methyl-2-pentanone (MIBK)	17.5		µg/l		20.0		88	70-130		
Methylene chloride	22.4		µg/l		20.0		112	70-130		
Styrene	17.0		µg/l		20.0		85	70-130		
1,1,2,2-Tetrachloroethane	20.8		µg/l		20.0		104	70-130		
Tetrachloroethene	19.8		µg/l		20.0		99	70-130		
Toluene	21.1		µg/l		20.0		105	70-130		
1,2,4-Trichlorobenzene	16.8		µg/l		20.0		84	70-130		
1,1,1-Trichloroethane	18.4		µg/l		20.0		92	70-130		
1,1,2-Trichloroethane	22.1		µg/l		20.0		110	70-130		

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719281 - SW846 5030 Water MS										
<u>LCS (1719281-BS1)</u>					<u>Prepared & Analyzed: 15-Nov-17</u>					
Trichloroethene	20.5		µg/l		20.0		102	70-130		
Vinyl chloride	21.6		µg/l		20.0		108	70-130		
Cyclohexane	19.5		µg/l		20.0		98	70-130		
Methyl acetate	22.3		µg/l		20.0		111	70-130		
Methylcyclohexane	18.9		µg/l		20.0		94	70-130		
Surrogate: 4-Bromofluorobenzene	50.4		µg/l		50.0		101	70-130		
Surrogate: Toluene-d8	50.6		µg/l		50.0		101	70-130		
Surrogate: 1,2-Dichloroethane-d4	53.7		µg/l		50.0		107	70-130		
Surrogate: Dibromofluoromethane	50.8		µg/l		50.0		102	70-130		
<u>LCS Dup (1719281-BS1)</u>					<u>Prepared & Analyzed: 15-Nov-17</u>					
1,1,2-Trichlorotrifluoroethane (Freon 113)	23.6		µg/l		20.0		118	70-130	2	20
Acetone	21.2		µg/l		20.0		106	70-130	5	20
Benzene	21.4		µg/l		20.0		107	70-130	2	20
Bromodichloromethane	18.2		µg/l		20.0		91	70-130	0.05	20
Bromoform	15.0		µg/l		20.0		75	70-130	4	20
Bromomethane	21.8		µg/l		20.0		109	70-130	0.8	20
2-Butanone (MEK)	18.5		µg/l		20.0		92	70-130	0.7	20
Carbon disulfide	18.0		µg/l		20.0		90	70-130	3	20
Carbon tetrachloride	15.6		µg/l		20.0		78	70-130	4	20
Chlorobenzene	20.6		µg/l		20.0		103	70-130	5	20
Chloroethane	20.0		µg/l		20.0		100	70-130	6	20
Chloroform	21.7		µg/l		20.0		108	70-130	0.3	20
Chloromethane	23.8		µg/l		20.0		119	70-130	0.5	20
1,2-Dibromo-3-chloropropane	16.0		µg/l		20.0		80	70-130	6	20
Dibromochloromethane	16.6		µg/l		20.0		83	70-130	1	20
1,2-Dibromoethane (EDB)	21.7		µg/l		20.0		108	70-130	3	20
1,2-Dichlorobenzene	19.7		µg/l		20.0		99	70-130	1	20
1,3-Dichlorobenzene	21.4		µg/l		20.0		107	70-130	6	20
1,4-Dichlorobenzene	20.9		µg/l		20.0		105	70-130	3	20
Dichlorodifluoromethane (Freon12)	23.4		µg/l		20.0		117	70-130	3	20
1,1-Dichloroethane	21.1		µg/l		20.0		106	70-130	0.09	20
1,2-Dichloroethane	21.6		µg/l		20.0		108	70-130	2	20
1,1-Dichloroethene	21.5		µg/l		20.0		107	70-130	1	20
cis-1,2-Dichloroethene	21.2		µg/l		20.0		106	70-130	0.7	20
trans-1,2-Dichloroethene	19.8		µg/l		20.0		99	70-130	2	20
1,2-Dichloropropane	20.6		µg/l		20.0		103	70-130	2	20
cis-1,3-Dichloropropene	16.6		µg/l		20.0		83	70-130	2	20
trans-1,3-Dichloropropene	16.6		µg/l		20.0		83	70-130	1	20
Ethylbenzene	20.2		µg/l		20.0		101	70-130	6	20
2-Hexanone (MBK)	17.0		µg/l		20.0		85	70-130	1	20
Isopropylbenzene	20.5		µg/l		20.0		103	70-130	4	20
Methyl tert-butyl ether	18.7		µg/l		20.0		93	70-130	0.5	20
4-Methyl-2-pentanone (MIBK)	17.1		µg/l		20.0		86	70-130	2	20
Methylene chloride	22.4		µg/l		20.0		112	70-130	0.04	20
Styrene	19.6		µg/l		20.0		98	70-130	15	20
1,1,2,2-Tetrachloroethane	21.5		µg/l		20.0		107	70-130	3	20
Tetrachloroethene	20.4		µg/l		20.0		102	70-130	3	20
Toluene	21.4		µg/l		20.0		107	70-130	2	20
1,2,4-Trichlorobenzene	17.7		µg/l		20.0		89	70-130	6	20
1,1,1-Trichloroethane	18.6		µg/l		20.0		93	70-130	1	20

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Volatile Organic Compounds - Quality Control

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8260C										
Batch 1719281 - SW846 5030 Water MS										
LCS Dup (1719281-BSD1)					Prepared & Analyzed: 15-Nov-17					
1,1,2-Trichloroethane	22.5		µg/l		20.0		112	70-130	2	20
Trichloroethene	21.0		µg/l		20.0		105	70-130	3	20
Vinyl chloride	22.1		µg/l		20.0		110	70-130	2	20
Cyclohexane	19.9		µg/l		20.0		100	70-130	2	30
Methyl acetate	21.5		µg/l		20.0		108	70-130	3	30
Methylcyclohexane	18.9		µg/l		20.0		94	70-130	0	30
Surrogate: 4-Bromofluorobenzene	52.0		µg/l		50.0		104	70-130		
Surrogate: Toluene-d8	50.1		µg/l		50.0		100	70-130		
Surrogate: 1,2-Dichloroethane-d4	53.0		µg/l		50.0		106	70-130		
Surrogate: Dibromofluoromethane	50.9		µg/l		50.0		102	70-130		

Notes and Definitions

D	Data reported from a dilution
GS1	Sample dilution required for high concentration of target analytes to be within the instrument calibration range.
J	Detected above the Method Detection Limit but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
U	Analyte included in the analysis, but not detected at or above the MDL.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

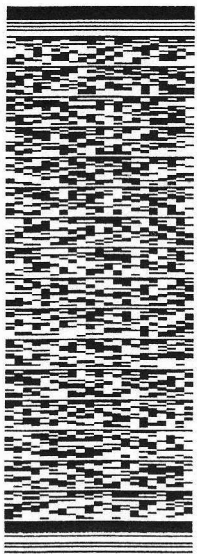
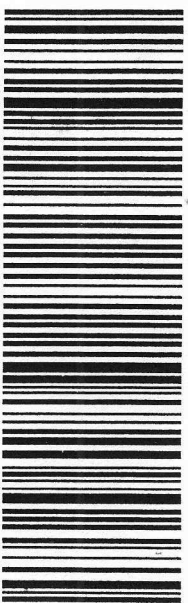
Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

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AGAWAM MA 01001 (413) 789-9018 REF NR CS DEPT			
			
			
			
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Batch Summary

1719220

Volatile Organic Compounds

1719220-BLK1
1719220-BS1
1719220-BSD1
1719220-MS1
1719220-MSD1
SC41366-01 (PW-4)
SC41366-02 (PW-5)
SC41366-03 (PW-6)
SC41366-04 (PW-7)

1719281

Volatile Organic Compounds

1719281-BLK1
1719281-BS1
1719281-BSD1
SC41366-05 (PW-8)

S709964

Volatile Organic Compounds

S709964-CAL1
S709964-CAL2
S709964-CAL3
S709964-CAL4
S709964-CAL5
S709964-CAL6
S709964-CAL7
S709964-CAL8
S709964-CAL9
S709964-CALA
S709964-CALB
S709964-ICV1
S709964-LCV1
S709964-TUN1

S710043

Volatile Organic Compounds

S710043-CCV1
S710043-TUN1

S710091

Volatile Organic Compounds

S710091-CCV1
S710091-TUN1



Minitab Statistical Analysis

Statistical Analysis of Treatment Removal Rate

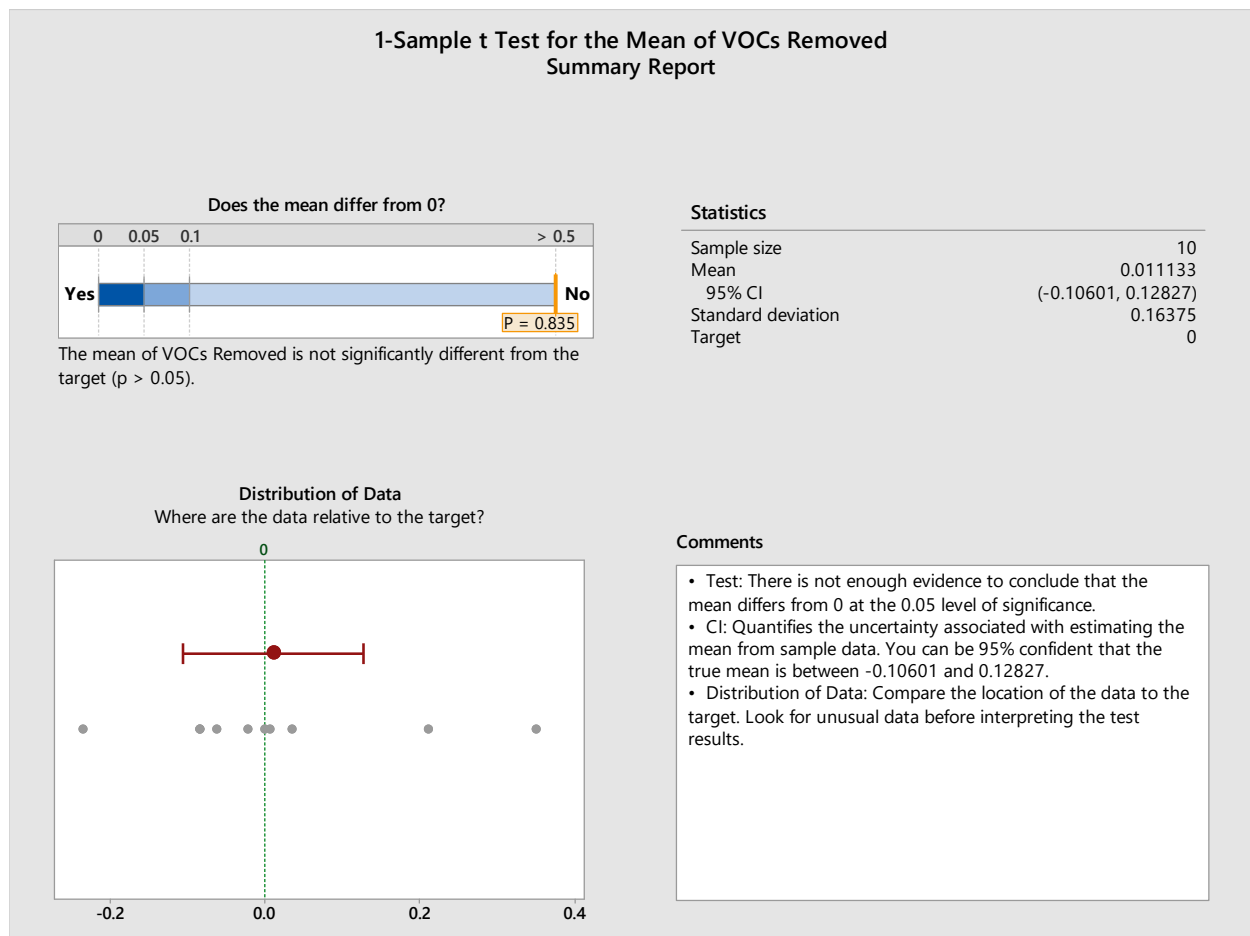
Purpose: Determine whether an asymptote (slope = 0) has been reached

Methodology: Student 1-Sample t-test and Hypothesis Test on the slope

Sample Size: 10

Sample Date: January – October 2017

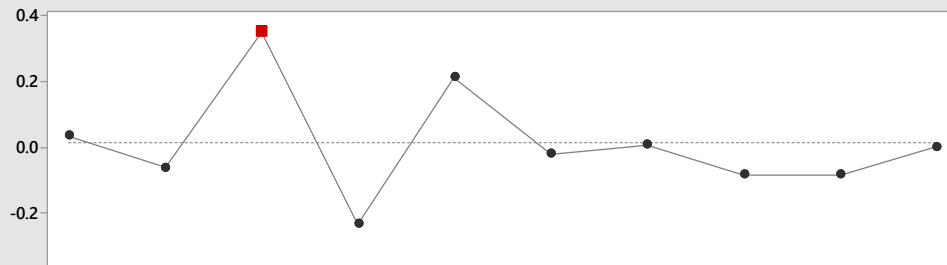
Conclusion: Operational data indicates that the remedial groundwater pumping and air-stripping treatment system has reached asymptotic removal rates at the 95% confidence limit on the slope (between -0.10601 and 0.12827).



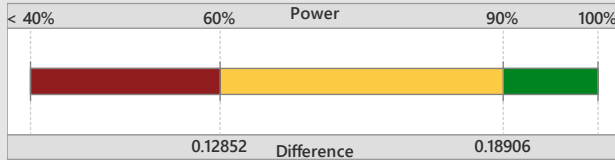
Source: Minitab® version 18.1

1-Sample t Test for the Mean of VOCs Removed Diagnostic Report

Data in Worksheet Order
Investigate any outliers (marked in red).



What is the chance of detecting a difference?



For $\alpha = 0.05$ and sample size = 10:

If the true mean differed from the target by 0.12852 in either direction, you would have a 60% chance of detecting the difference. If it differed by 0.18906, you would have a 90% chance.

What difference can you detect with a sample size of 10?

Difference	Power
0.12852	60%
0.14443	70%
0.16310	80%
0.18906	90%

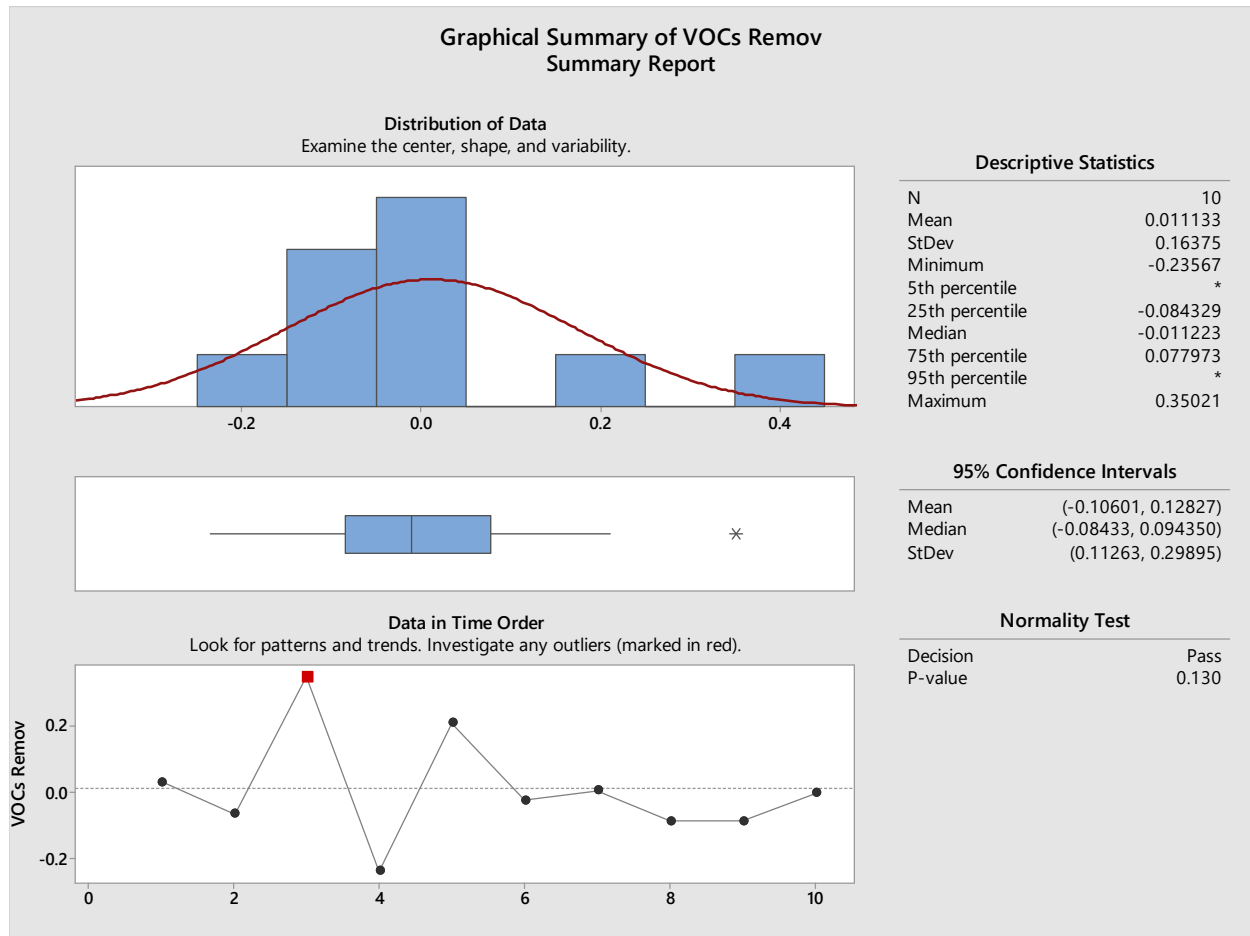
Power is a function of the sample size and the standard deviation. To detect smaller differences, consider increasing the sample size.

Source: Minitab® version 18.1

1-Sample t Test for the Mean of VOCs Removed Report Card		
Check	Status	Description
Unusual Data		One data point (row 3) is unusual compared to the others. Because unusual data can have a strong influence on the results, you should try to identify the cause of its unusual nature. Correct any data entry or measurement errors. Consider removing data that are associated with special causes and repeating the analysis.
Normality		Because your sample size is less than 20, normality can be an issue. If the data are not normally distributed, the p-value may be inaccurate with small samples. In addition, unusual data can have a strong influence on the test results. Because normality cannot be reliably checked with small samples, you should use caution when interpreting the test results.
Sample Size		Your data does not provide sufficient evidence to conclude that the mean differs from the target. This may result from having a sample size that is too small. Based on your sample size, standard deviation, and α , you would have a 90% chance of detecting a difference of 0.18906. To determine how large your sample needs to be to detect a difference that has practical implications, repeat the analysis and enter a value for the difference.

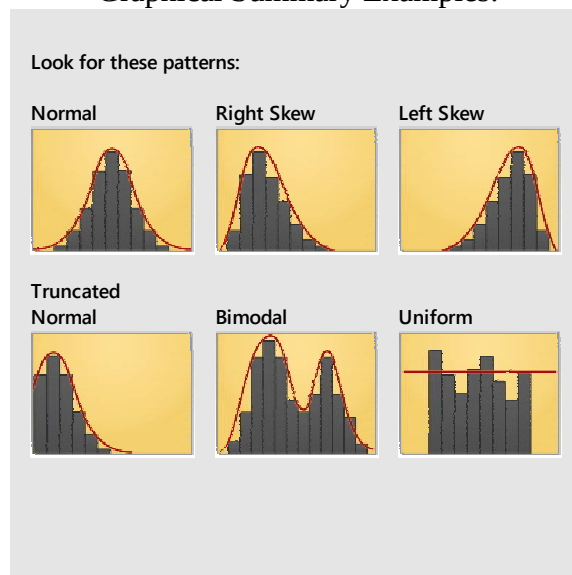
Source: Minitab® version 18.1

Due to the sample size being less than 20 ($n=10$) normality can be an issue (see 1-Sample t Test for the Mean of the Slope, Report Card above); therefore the data has been graphically summarized below to identify the distribution. The data shows a normal distribution.



Source: Minitab® version 18.1

Graphical Summary Examples:



Source: Minitab® version 18.1