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July 21, 2017

Mr. Steve Teel
Washington State Department of Ecology
Southwest Regional Office
300 Desmond Drive SE
Lacey, WA 98503

SUBJECT: SECOND QUARTER 2017 GROUNDWATER COMPLIANCE MONITORING REPORT
Former Olympia Dry Cleaners Site
606 Union Avenue SE
Olympia, Washington

Dear Mr. Teel:

This groundwater compliance monitoring report is the second quarterly monitoring report of 2017 for the Former Olympia Dry Cleaners Site (Site) prepared on behalf of the Estate of Katherine Burleson and GJG, LLC, to meet the reporting requirements of Consent Decree No. 14-2-02104-3 (State of Washington 2014) and the Cleanup Action Plan (Ecology 2014). The Site is located at 606 Union Avenue SE in Olympia, Washington (Figure 1).

In September 2015, an excavation to remove accessible soil contaminated with chlorinated solvents was completed in accordance with the Remedial Action Work Plan (RAWP; Floyd|Snider 2015a) and RAWP Addendum (Floyd|Snider 2015b). Source removal areas are shown on Figure 2. After the remedial action was completed, a Compliance Monitoring Plan (CMP) for post-remediation monitoring was developed in coordination with the Washington State Department of Ecology (Ecology; Floyd|Snider 2016), with modifications approved by Ecology (Ecology 2017) based on the 2016 annual report (Floyd|Snider 2017) as described below. The objective of this groundwater compliance monitoring report is to document the results of the compliance monitoring completed in June 2017. The cumulative results of these quarterly monitoring events will be used to assess the ongoing effectiveness of the cleanup action and to document compliance with the Site cleanup levels.

2017 COMPLIANCE MONITORING SUMMARY

The compliance monitoring network for long-term groundwater monitoring at the Site includes monitoring wells MW-06, MW-09, MW-11, MW-13, and MW-14. Per the CMP, and in concurrence with Ecology, the monitoring frequency has been reduced to semiannually after the first year of quarterly monitoring. The active seep located along the Cherry Street SE curb line and north of the main excavation area, will continue to be monitored on a quarterly basis in 2017 to evaluate surface discharges of the groundwater seep. In addition, a SEEP-POST sample will be

collected on a quarterly basis until treatment of the seep (using a carbon filtration sock) is no longer required. The current compliance monitoring network is shown on Figure 2.

SECOND QUARTER COMPLIANCE MONITORING SAMPLE COLLECTION

This section describes the seep water sampling performed in June 2017. There were no significant deviations from the CMP during this monitoring event; the field methods used were in substantive accordance with the CMP.

The water samples were submitted to Fremont Analytical, Inc., in Seattle, Washington, under chain of custody for analysis of the chemicals of concern (COCs) at the Site, which are tetrachloroethene (PCE), trichloroethene (TCE), *cis*- and *trans*-1,2-dichloroethene (DCE), 1,1-DCE, and vinyl chloride. The analytical results from the June 2017 seep sampling are provided in Table 1, along with data from the 2016 quarterly monitoring events and pre-remediation data for comparison. A copy of the laboratory report is included in Attachment 1.

Seep Treatment

As a result of breakthrough of PCE after the filter sock in the fourth quarter of 2016 and the first quarter of 2017 (likely associated with high groundwater and wet winter weather, including freeze/thaw cycles), a second carbon filter sock was added in series at the curb line north of the primary seep treatment sock to increase removal efficiency. During the June 2017 monitoring event, the downgradient carbon filter sock was rotated and moved to the upgradient curb line and a new carbon filter sock was placed in the downgradient position.

Seep Water Sample Collection and Results

During the June 2017 monitoring event, the groundwater seep was observed to still be flowing between curb sections along the curb line of Cherry Street SE, north of the main excavation area and the former seep area, and between the concrete curb and the asphalt roadway (Figure 2). The seep is being expressed through a small void in the asphalt under the curb. A grab sample was collected from the seep (SEEP) on June 21, 2017, while the filter sock was removed for replacement. An additional seep grab sample (SEEP-POST) was collected from the discharge of the filter sock an hour after installing the new activated carbon filter sock. These results are presented in Table 1.

The unfiltered seep water sample collected from the curb line (SEEP) had PCE and vinyl chloride concentrations exceeding the respective cleanup levels. The concentration of TCE remains less than its respective cleanup level of 30 micrograms per liter (µg/L). The vinyl chloride and *cis*-1,2-DCE concentrations increased since the last sampling event, but still reflect an overall downward trend of concentration compared to the 2016 monitoring data. The minor increase observed this quarter may be a result of less groundwater seep expression during the dryer months of the year.

The water sample taken at the seep immediately downstream of the new carbon filter sock (SEEP-POST) demonstrated 100% removal efficiency with all Site COCs at non-detectable concentrations. This demonstrates the effectiveness of maintaining two carbon filter socks in series for added resonance time with routine quarterly rotation and replacement as described above.

Data Validation

A Compliance Screening (Stages 1 & 2A) data quality review was performed on volatile organic compound data resulting from laboratory analysis by EPA Method 8260C. The analytical data were validated in accordance with the U.S. Environmental Protection Agency's (USEPA's) *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA 2016).

A total of two surface water samples and one trip blank were submitted in one sample delivery group (FA1706259) to Fremont Analytical, Inc., of Seattle, Washington for chemical analysis. For all analyses the method blanks had no detections. The surrogate, matrix spike (MS), matrix spike duplicate (MSD), laboratory control sample recoveries, and MS/MSD relative percent differences all met USEPA requirements.

The laboratory noted that the trip blank that had been included had been generated in April and was therefore outside of the holding time for the method and all results were qualified H. These have been updated to UJ for database entry.

No additional qualifiers were added to the analytical results based on the data quality review. Data are determined to be of acceptable quality for use as reported by the lab.

COMPLIANCE MONITORING SCHEDULE

The next compliance monitoring event will be completed in September 2017. It will consist of the collection of groundwater samples from MW-06, MW-09, MW-11, MW-13, and MW-14, as well as water samples from the seep and the discharge of the filter socks (SEEP-POST) to continue documenting the treatment efficiency of the filter socks. The results of the next compliance monitoring will be documented in a quarterly monitoring report, which will be submitted to Ecology no later than 90 days following the sampling event.

CONTINUED SEEP TREATMENT

The filter socks will continue to be rotated and changed out quarterly to ensure that breakthrough at concentrations greater than the cleanup level does not occur. During each quarterly monitoring event, the downstream sock will be rotated and moved upstream, and a new sock will be installed in the downstream position. The filter socks are monitored by an owner representative on a weekly basis, per the right-of-way obstruction permit requirements, to make sure they remain in place and attached to the curb. The right-of-way obstruction permit acquired from the City of Olympia for placement of the filter sock is valid through March 2018.

REFERENCES

Floyd|Snider. 2015a. *Former Olympia Dry Cleaners Site Remedial Action Work Plan*. Prepared for Washington State Department of Ecology. 15 April.

_____. 2015b. *Memorandum Re: Remedial Action Work Plan Addendum, Former Olympia Dry Cleaners Site*. Prepared for Steve Teel, Washington State Department of Ecology. 22 June.

_____. 2016. *Former Olympia Dry Cleaners Site Compliance Monitoring Plan*. Prepared for Washington State Department of Ecology. 28 January.

_____. 2017. *2016 Annual Summary Report for Groundwater Compliance Monitoring, Former Olympia Dry Cleaners Site*. Prepared for Washington State Department of Ecology. 13 February.

State of Washington. 2014. *Consent Decree No. 14-2-02104-3, State of Washington, Department of Ecology v. The Estate of Katherine Burleson and GJG, LLC*. Thurston County Superior Court. 31 October.

U.S. Environmental Protection Agency (USEPA). 2016. *National Functional Guidelines for Superfund Organic Methods Data Review*. Prepared by the Office of Superfund Remediation and Technology Innovation. EPA-540-R-2016-002/OLEM 9355.0-134. September.

Washington State Department of Ecology (Ecology). 2014. *Former Olympia Dry Cleaners Site Cleanup Action Plan*. 29 October.

_____. 2017. *Ecology Comments on the 2016 Annual Summary Report for Groundwater Compliance Monitoring, prepared by Floyd|Snider, dated February 13, 2017, Olympia Dry Cleaners Site*. Letter from Steve Teel, Ecology, to Tom Colligan, Floyd|Snider. 8 March.

Sincerely yours,

FLOYD | SNIDER

Lynn Grochala
Senior Environmental Scientist

Encl.: Table 1 Surface Water Monitoring Data
Figure 1 Site Vicinity Map
Figure 2 Source Removal Areas and Compliance Monitoring Locations
Attachment 1 Laboratory Data

Tables

Table 1
Surface Water Monitoring Data

Sample Location	Status	Date	Tetrachloroethene (µg/L)	Trichloroethene (µg/L)	*cis* -1,2-Dichloroethene (µg/L)	*trans* -1,2-Dichloroethene (µg/L)	1,1-Dichloroethene (µg/L)	Vinyl Chloride (µg/L)
SEEP	Pre-remediation[1]	7/10/2008	**390**	**580**	2,500	12	2.6	**190**
	Post-remediation	3/8/2016	**33**	15	110	1.0 U	1.0 U	**15**
		3/30/2016	**23**	17	160	1.0 U	1.0 U	**22**
		6/9/2016	**16**	18	170	1.3	1.0 U	**20**
		9/29/2016	**16**	30	180	1.0 U	1.0 U	**16**
		12/20/2016	**56**	**44**	110	1.0 U	1.0 U	**10**
		3/10/2017	**13**	7.6	19	1.0 U	1.0 U	1.8 J
		6/21/2017	**12**	8.5	57	1.0 U	1.0 U	**6.2**
SEEP-CB[2]	Pre-remediation	10/15/2008	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
	Post-remediation	6/9/2016	1.0 U	0.50 U	1.8	1.0 U	1.0 U	0.20 U
		3/22/2017	1.0 U	0.72	1.3	1.0 U	1.0 U	0.20 U
SEEP-POST[3]	Post-remediation	9/29/2016	1.0 U	0.55	2.3	1.0 U	1.0 U	0.62
		12/20/2016	**10**	8.0	19	1.0 U	1.0 U	2.2
		3/10/2017	**3.4 J**	2.5	6.3	1.0 U	1.0 U	1.3
		3/22/2017	**4.8**	4.1	10	1.0 U	1.0 U	1.3
		3/30/2017	1.0 U	0.50 U	1.0 U	1.0 U	1.0 U	0.20 U
		6/21/2017	1.0 U	0.50 U	1.0 U	1.0 U	1.0 U	0.20 U
Surface Water Cleanup Level (µg/L)			3.3	30	NA	10,000	3.2	2.4

Notes:

BOLD Indicates a concentration that exceeds the site cleanup level.

1 Pre-remediation seep samples were collected approximately 16 feet south of the current seep sampling location. However, both pre- and post-remediation samples are representative of the same source of seep water.

2 Sample collected at the downstream catch basin. Pre-remediation sample was collected by the Washington State Department of Ecology from approximately the same location and named "Street - 2."

3 Sample collected downstream of the carbon filter sock to demonstrate treatment efficiency.

Abbreviations:

µg/L Micrograms per liter

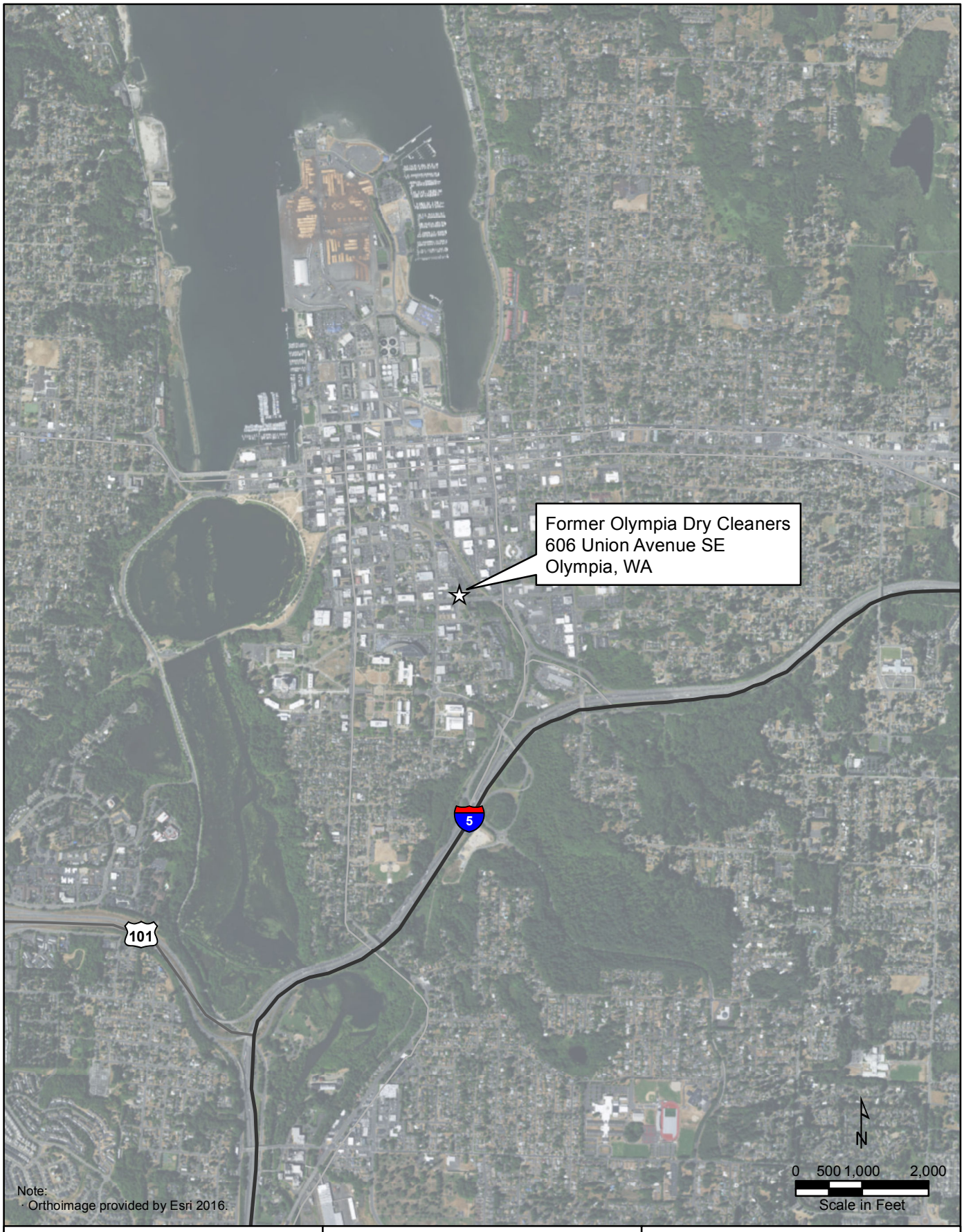
NA Not applicable

Qualifier:

J The analyte was detected; the concentration is considered to be an estimate.

U The analyte was not detected at the given reporting limit.

Figures



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Quarterly Groundwater Compliance Monitoring
Former Olympia Dry Cleaners Site
Olympia, Washington

Figure 1
Site Vicinity Map

I:\GIS\Projects\GTH-Olympia_Dry_Cleaners\MXD\QuarterlyGroundwaterComplianceMonitoring\Figure 1 Vicinity Map.mxd
4/18/2017

Legend

- Compliance Monitoring Well
- Seep

Utilities

- E — Underground Electric Line
- GAS — Underground Gas Line
- OE — Overhead Electric Line
- SW — Underground Stormwater Line
- T — Overhead Telephone Line
- W — Underground Water Line
- SS — Underground Sanitary Sewer Line

- Sidewalk
- Concrete Pad
- Building Outline
- Property Boundary
- Building Awning
- Soil Excavation Limits (2015)
- Shrubs/Trees

ASPHALT LOT

GRASSY AREA

ASPHALT LOT

UNION AVE SOUTHEAST

MW-06

Cherry Street Q-Tip Trust Building

MW-09

Boiler Room

Dry Cleaner Machine

Former Olympia Dry Cleaners Building

Roof Line

ARTESIAN SUPPLY WELL

MW-14

MW-11

SEEP

FORMER SEEP AREA

CATCHBASIN

MANHOLE

MANHOLE

MANHOLE

CHERRY STREET SOUTHEAST

MW-13

N

0 12.5 25 50

Scale in Feet

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Quarterly Groundwater Compliance Monitoring
Former Olympia Dry Cleaners Site
Olympia, Washington

Figure 2
Source Removal Areas and
Compliance Monitoring Locations

\\Gimli\enterprise\GIS\Projects\GTH-Olympia_Dry_Cleaners\MXD\QuarterlyGroundwaterComplianceMonitoring\2017\Figure 2 Source Removal Areas and Compliance Monitoring Locations-Q4.mxd
4/18/2017

Attachment 1
Laboratory Data

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Floyd | Snider
Lynn Grochala
601 Union St., Suite 600
Seattle, WA 98101

RE: GTH - Olympia Dry Cleaners
Work Order Number: 1706259

June 28, 2017

Attention Lynn Grochala:

Fremont Analytical, Inc. received 3 sample(s) on 6/21/2017 for the analyses presented in the following report.

Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Mike Ridgeway
Laboratory Director

Date: *06/28/2017*

CLIENT: Floyd | Snider
Project: GTH - Olympia Dry Cleaners
Work Order: 1706259

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1706259-001	SEEP-062117	06/21/2017 11:10 AM	06/21/2017 2:00 PM
1706259-002	SEEP-POST-062117	06/21/2017 12:15 PM	06/21/2017 2:00 PM
1706259-003	Trip Blank	04/08/2016 12:00 AM	06/21/2017 2:00 PM

Case Narrative

WO#: **1706259**
Date: **6/28/2017**

CLIENT: Floyd | Snider
Project: GTH - Olympia Dry Cleaners

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **1706259**
Date Reported: **6/28/2017**

Client: Floyd | Snider
Collection Date: 6/21/2017 11:10:00 AM
Project: GTH - Olympia Dry Cleaners
Lab ID: 1706259-001
Matrix: Water
Client Sample ID: **SEEP-062117**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 17465		Analyst: NG
Vinyl chloride	6.17	0.200		µg/L	1	6/27/2017 1:40:25 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	6/27/2017 1:40:25 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	6/27/2017 1:40:25 PM
cis-1,2-Dichloroethene	56.9	10.0	D	µg/L	10	6/27/2017 7:29:08 AM
Trichloroethene (TCE)	8.49	0.500		µg/L	1	6/27/2017 1:40:25 PM
Tetrachloroethene (PCE)	11.6	1.00		µg/L	1	6/27/2017 1:40:25 PM
Surr: Dibromofluoromethane	100	45.4-152		%Rec	1	6/27/2017 1:40:25 PM
Surr: Toluene-d8	93.4	40.1-139		%Rec	1	6/27/2017 1:40:25 PM
Surr: 1-Bromo-4-fluorobenzene	92.6	64.2-128		%Rec	1	6/27/2017 1:40:25 PM

Analytical Report

Work Order: **1706259**
Date Reported: **6/28/2017**

Client: Floyd | Snider
Project: GTH - Olympia Dry Cleaners
Lab ID: 1706259-002
Client Sample ID: **SEEP-POST-062117**

Collection Date: 6/21/2017 12:15:00 PM
Matrix: Water

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 17465		Analyst: NG
Vinyl chloride	ND	0.200		µg/L	1	6/27/2017 2:09:07 PM
1,1-Dichloroethene	ND	1.00		µg/L	1	6/27/2017 2:09:07 PM
trans-1,2-Dichloroethene	ND	1.00		µg/L	1	6/27/2017 2:09:07 PM
cis-1,2-Dichloroethene	ND	1.00		µg/L	1	6/27/2017 2:09:07 PM
Trichloroethene (TCE)	ND	0.500		µg/L	1	6/27/2017 2:09:07 PM
Tetrachloroethene (PCE)	ND	1.00		µg/L	1	6/27/2017 2:09:07 PM
Surr: Dibromofluoromethane	99.9	45.4-152		%Rec	1	6/27/2017 2:09:07 PM
Surr: Toluene-d8	105	40.1-139		%Rec	1	6/27/2017 2:09:07 PM
Surr: 1-Bromo-4-fluorobenzene	90.7	64.2-128		%Rec	1	6/27/2017 2:09:07 PM

Analytical Report

Work Order: **1706259**
Date Reported: **6/28/2017**

Client: Floyd | Snider
Project: GTH - Olympia Dry Cleaners
Lab ID: 1706259-003
Client Sample ID: **Trip Blank**

Collection Date: 4/8/2016
Matrix: Water

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 17465		Analyst: NG
Vinyl chloride	ND	0.200	H	µg/L	1	6/26/2017 10:54:43 PM
1,1-Dichloroethene	ND	1.00	H	µg/L	1	6/26/2017 10:54:43 PM
trans-1,2-Dichloroethene	ND	1.00	H	µg/L	1	6/26/2017 10:54:43 PM
cis-1,2-Dichloroethene	ND	1.00	H	µg/L	1	6/26/2017 10:54:43 PM
Trichloroethene (TCE)	ND	0.500	H	µg/L	1	6/26/2017 10:54:43 PM
Tetrachloroethene (PCE)	ND	1.00	H	µg/L	1	6/26/2017 10:54:43 PM
Surr: Dibromofluoromethane	95.5	45.4-152	H	%Rec	1	6/26/2017 10:54:43 PM
Surr: Toluene-d8	111	40.1-139	H	%Rec	1	6/26/2017 10:54:43 PM
Surr: 1-Bromo-4-fluorobenzene	93.8	64.2-128	H	%Rec	1	6/26/2017 10:54:43 PM

Work Order: 1706259
CLIENT: Floyd | Snider
Project: GTH - Olympia Dry Cleaners

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-17465** SampType: **LCS** Units: **µg/L** Prep Date: **6/26/2017** RunNo: **37048**
Client ID: **LCSW** Batch ID: **17465** Analysis Date: **6/26/2017** SeqNo: **711435**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	23.3	0.200	20.00	0	117	48	145				
1,1-Dichloroethene	21.2	1.00	20.00	0	106	57.5	150				
trans-1,2-Dichloroethene	22.3	1.00	20.00	0	112	71.7	129				
cis-1,2-Dichloroethene	21.5	1.00	20.00	0	107	70.2	139				
Trichloroethene (TCE)	22.3	0.500	20.00	0	111	65.2	136				
Tetrachloroethene (PCE)	21.2	1.00	20.00	0	106	47.5	147				
Surr: Dibromofluoromethane	26.3		25.00		105	45.4	152				
Surr: Toluene-d8	25.2		25.00		101	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.8		25.00		103	64.2	128				

Sample ID **MB-17465** SampType: **MBLK** Units: **µg/L** Prep Date: **6/26/2017** RunNo: **37048**
Client ID: **MBLKW** Batch ID: **17465** Analysis Date: **6/26/2017** SeqNo: **711436**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.200									
1,1-Dichloroethene	ND	1.00									
trans-1,2-Dichloroethene	ND	1.00									
cis-1,2-Dichloroethene	ND	1.00									
Trichloroethene (TCE)	ND	0.500									
Tetrachloroethene (PCE)	ND	1.00									
Surr: Dibromofluoromethane	20.4		25.00		81.5	45.4	152				
Surr: Toluene-d8	18.9		25.00		75.6	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	22.9		25.00		91.5	64.2	128				

Sample ID **1706274-002BDUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/26/2017** RunNo: **37048**
Client ID: **BATCH** Batch ID: **17465** Analysis Date: **6/27/2017** SeqNo: **711426**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	ND	0.200						0		30	
1,1-Dichloroethene	ND	1.00						0		30	

Work Order: 1706259
CLIENT: Floyd | Snider
Project: GTH - Olympia Dry Cleaners

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1706274-002BDUP** SampType: **DUP** Units: **µg/L** Prep Date: **6/26/2017** RunNo: **37048**
Client ID: **BATCH** Batch ID: **17465** Analysis Date: **6/27/2017** SeqNo: **711426**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
trans-1,2-Dichloroethene	ND	1.00						0		30	
cis-1,2-Dichloroethene	ND	1.00						0		30	
Trichloroethene (TCE)	ND	0.500						0		30	
Tetrachloroethene (PCE)	ND	1.00						0		30	
Surr: Dibromofluoromethane	24.3		25.00		97.1	45.4	152		0		
Surr: Toluene-d8	21.5		25.00		85.8	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	22.8		25.00		91.3	64.2	128		0		

Sample ID **1706288-001AMS** SampType: **MS** Units: **µg/L** Prep Date: **6/26/2017** RunNo: **37048**
Client ID: **BATCH** Batch ID: **17465** Analysis Date: **6/27/2017** SeqNo: **711429**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	24.5	0.200	20.00	0	123	41	165				
1,1-Dichloroethene	22.2	1.00	20.00	0	111	51.6	164				
trans-1,2-Dichloroethene	23.4	1.00	20.00	0	117	63.5	138				
cis-1,2-Dichloroethene	28.3	1.00	20.00	0	142	60	154				
Trichloroethene (TCE)	23.6	0.500	20.00	0	118	60.4	134				
Tetrachloroethene (PCE)	22.8	1.00	20.00	0	114	50.3	133				
Surr: Dibromofluoromethane	25.8		25.00		103	45.4	152				
Surr: Toluene-d8	24.6		25.00		98.3	40.1	139				
Surr: 1-Bromo-4-fluorobenzene	25.6		25.00		102	64.2	128				

Sample ID **1706288-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **6/26/2017** RunNo: **37048**
Client ID: **BATCH** Batch ID: **17465** Analysis Date: **6/27/2017** SeqNo: **711430**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	25.5	0.200	20.00	0	127	41	165	24.53	3.87	30	
1,1-Dichloroethene	23.2	1.00	20.00	0	116	51.6	164	22.21	4.23	30	
trans-1,2-Dichloroethene	23.2	1.00	20.00	0	116	63.5	138	23.35	0.839	30	
cis-1,2-Dichloroethene	22.0	1.00	20.00	0	110	60	154	28.32	25.1	30	

Work Order: 1706259
CLIENT: Floyd | Snider
Project: GTH - Olympia Dry Cleaners

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1706288-001AMSD** SampType: **MSD** Units: **µg/L** Prep Date: **6/26/2017** RunNo: **37048**
Client ID: **BATCH** Batch ID: **17465** Analysis Date: **6/27/2017** SeqNo: **711430**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Trichloroethene (TCE)	23.6	0.500	20.00	0	118	60.4	134	23.62	0.0986	30	
Tetrachloroethene (PCE)	23.2	1.00	20.00	0	116	50.3	133	22.78	1.74	30	
Surr: Dibromofluoromethane	26.1		25.00		105	45.4	152		0		
Surr: Toluene-d8	26.7		25.00		107	40.1	139		0		
Surr: 1-Bromo-4-fluorobenzene	25.9		25.00		104	64.2	128		0		

Sample Log-In Check List

Client Name:	**FS**	Work Order Number:	**1706259**
Logged by:	**Erica Silva**	Date Received:	**6/21/2017 2:00:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2.	How was the sample delivered?	Client		

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☑	NA ☐
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	2.0
Sample	2.6

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 6/21/17 Page: 1 of: 1

Laboratory Project No (internal): 1706259

Project Name: GTH-Olympia Dry Cleaners

Special Remarks:

Project No: —

Client: Floyd Snider

Collected by: Pamela Osterhout

Address: 601 Union St, Suite 600

Location: Olympia, WA

City, State, Zip: Seattle, WA 98101

Report To (PM): Lynn Grochala

Telephone: 206-292-2078

Sample Disposal: ☐ Return to client ☒ Disposal by lab (after 30 days)

Fax:

PM Email: Lynn.Grochala@FloydSnider.com

Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	*CVOCs	Comments
1 SEEP-062117	6/21/17	1110	W													X		
2 SEEP-POST-062117	"	1215	W													X		
3 Trip Blank	—	—	W													X		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

*CVOC List: PCE, TCE, cis-, trans-, 1,2-DCE, 1,1-DCE, vinyl chloride

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x Pamela Osterhout	6/21/17 @ 1400	x	6/21/2017 1400
Relinquished	Date/Time	Received	Date/Time
x		x	

Turn-around Time:

- ☒ Standard
- ☐ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)