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**GROUNDWATER MONITORING AND
LIMITED SUBSURFACE INVESTIGATION REPORT**

**Former U-Haul Facility No. 615081
800-812 West Columbia Drive
Kennewick, Washington 99336**

**Washington Department of Ecology Facility/Site No. 333
Voluntary Cleanup Program Site ID No. CE0494
Cleanup Site ID No. 4898**

Prepared on behalf of:

**AMERCO Real Estate Company
2727 North Central Avenue, Suite 500
Phoenix, Arizona 85004**

Submitted to:

**Washington Department of Ecology
CRO Toxics Cleanup Program
1250 West Alder Street
Union Gap, Washington 98903-0009**

ATC Project No. 1052 5081 06

September 10, 2019

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TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	PURPOSE.....	1
1.2	BACKGROUND.....	1
2.0	FIELD INVESTIGATIONS.....	2
2.1	GROUNDWATER SAMPLING.....	2
2.2	LIMITED SUBSURFACE INVESTIGATION.....	3
3.0	LABORATORY QUALITY ASSURANCE/QUALITY CONTROL (QA/QC).....	5
4.0	CONCLUSIONS.....	5
5.0	RECOMMENDATIONS.....	7
6.0	REFERENCES.....	7
7.0	LIMITATIONS AND CERTIFICATION.....	7

FIGURES

Figure 1	Site Vicinity Map
Figure 2	Site Plan
Figure 3	Confirmation Boring Locations
Figure 4	Groundwater Conditions Map (06/13/19)

TABLES

Table 1	Summary of Select Soil Laboratory Analytical Data
Table 2	Summary of Groundwater Field Parameters
Table 3	Summary of Groundwater Gauging and Laboratory Analytical Data (June 2019)
Table 4	Summary of Historical Groundwater Gauging and Laboratory Analytical Data
Table 5	Summary of Soil cPAH Calculations

APPENDICES

Appendix A	ATC Standard Operating Procedures
Appendix B	Field Data (June 2019 Groundwater Sampling Event)
Appendix C	Laboratory Analytical Data Report (Groundwater - June 2019)
Appendix D	Groundwater Elevation, Depth to Groundwater and COC Attenuation Graphs
Appendix E	Key to Symbols and Descriptions and Edited Soil Boring Logs
Appendix F	Laboratory Analytical Data Report (Soil - June 2019)

1.0 INTRODUCTION

1.1 Purpose

On behalf of AMERCO Real Estate Company (AREC), ATC Group Services LLC (ATC) conducted groundwater monitoring and performed a limited subsurface investigation (LSI) at the former U-Haul facility located at 800-812 West Columbia Drive in Kennewick, Washington (herein, the Site; **Figure 1, Site Vicinity Map** and **Figure 2, Site Plan**).

Groundwater monitoring activities were completed on June 13, 2019 in general accordance with the recommendations proposed in ATC's *Groundwater Monitoring Report (March 2019)*, dated March 29, 2019 (as conditionally approved by the Washington State Department of Ecology [Ecology] via email dated April 15, 2019).

The LSI was conducted on June 27 and 28, 2019; the scope of work included drilling and soil sampling in general accordance with the Ecology-approved *Site Assessment Work Plan (Work Plan)* dated August 29, 2018 (ATC, 2018).

The laboratory analytical results from samples obtained during this investigation were compared to the Ecology-established Model Toxics Control Act (MTCA) cleanup levels for groundwater and soil. In lieu of an established MTCA groundwater cleanup level (or where applicable), chemicals of concern (COC) were compared to the Ecology-established Maximum Contaminant Level (MCL).

1.2 Background

AREC (or a subsidiary thereof) has owned the Site since November 1978, although it has been leased to and operated as Elite Auto Sales and Detailing since circa May 2007. Refer to the Work Plan for a historical summary of environmental investigations conducted at the Site.

Based on the cumulative data, the proposed scope presented in the Work Plan included a confirmation boring adjacent to monitor well UKMW-5 to evaluate soil conditions at 10 feet below ground surface (bgs) where historical soil data indicated benzo(a)pyrene at a concentration of 0.185 milligrams per kilogram (mg/kg) as analyzed using United States Environmental Protection Agency (EPA) Method 8270M-SIM. The MTCA Method A soil cleanup level (unrestricted land use) for benzo(a)pyrene is 0.1 mg/kg.

Subsequent to the preparation of the Work Plan, ATC identified additional soil data (Blaes Environmental Management [BEM], 2002). The scope of work performed by BEM included the attempt to drill and sample soil at five locations north of the building at 812 West Columbia Drive utilizing a hand-held AMS hollow-stem auger drill kit. Four soil samples were successfully collected at three boring locations as follows:

- Drilled 10 degrees off vertical toward the west, boring **SB-1** was sampled at approximate depths of five feet bgs (SB1@5') and 8.5 feet bgs (SB1@8.5');
- Drilled 10 degrees off vertical toward the south, boring **SB-3** was sampled at approximately five feet bgs (SB3@5'); and,
- Boring **SB-5** was sampled at approximately 2.5 feet bgs. The soil sample was referenced on the chain of custody as OS@2.5' based on its targeted area of concern – an oil stain observed on the asphalt parking surface at the time of the investigation.

The approximate locations of SB-1, SB-3 and SB-5 are depicted on **Figure 3, Confirmation Boring Locations** and select analytical results are included in **Table 1, Summary of Select Soil Laboratory Analytical Data**. Benzo(a)pyrene was reported at concentrations exceeding its MTCA Method A soil cleanup level at SB1@5' (0.800 mg/kg), SB1@8.5' (3.02 mg/kg) and OS@2.5' (0.138 mg/kg) as analyzed using EPA Method 8270 (mod).

2.0 FIELD INVESTIGATIONS

2.1 Groundwater Sampling

ATC performed groundwater gauging and sampling activities on June 13, 2019. The depth to groundwater was measured in six wells (a wasp nest on the bumper of an inoperable car adjacent to UKMW-3 precluded access to that well). Purging and sampling was conducted utilizing a peristaltic pump at wells UKMW-1 and UKMW-5 in general accordance with ATC Standard Operating Procedure (SOP) – Low-Flow Purging and Groundwater Sampling (**Appendix A**). Groundwater physical parameters including temperature, specific conductance, turbidity, dissolved oxygen, pH and oxidation reduction potential were collected at regular intervals during purge activities. The final field measurements are included in **Table 2, Summary of Groundwater Field Parameters**. The monitor well gauging log, the monitoring well purging and sampling logs and the calibration certificate for the YSI Pro Plus (used to obtain the field parameters) are included in **Appendix B**.

SITE HYDROGEOLOGY (06/13/19):

Minimum depth to groundwater (feet below top of casing [TOC]):	12.18 (UKMW-2)
Maximum depth to groundwater (feet below TOC):	13.52 (UKMW-7)
Average groundwater elevation (feet above mean sea level):	332.05
Change in average groundwater elevation since previous (March 2019) monitoring event (feet):	+2.22
Approximate groundwater gradient (foot/foot [ft/ft]) / flow direction (between UKMW-5 and UKMW-1):	0.0028 / Northwest
Previous groundwater gradient (ft/ft) / flow direction:	0.0028 / Northwest

GROUNDWATER CONDITIONS (06/13/19):

Minimum dissolved phase chlorobenzene concentration excluding "non-detects" (micrograms per liter [$\mu\text{g/L}$]):	109 (UKMW-5)
Maximum dissolved phase chlorobenzene concentration ($\mu\text{g/L}$):	109 (UKMW-5)
Maximum dissolved phase chlorobenzene ($\mu\text{g/L}$) concentration observed previous sampling event:	All results were non-detect.
Minimum dissolved phase 1,4-dichlorobenzene concentration excluding "non-detects" ($\mu\text{g/L}$):	43.4 (UKMW-5)
Maximum dissolved phase 1,4-dichlorobenzene concentration ($\mu\text{g/L}$):	43.4 (UKMW-5)
Maximum dissolved phase 1,4-dichlorobenzene concentration ($\mu\text{g/L}$) observed previous sampling event:	All results were non-detect.

Samples were submitted to Pace Analytical in Mt. Juliet, Tennessee for analyses of volatile organic compounds (VOC) utilizing EPA Method 8260C. The laboratory analytical report with chain of custody document is included in **Appendix C**.

There were no VOC detected at or exceeding their respective laboratory specified reported detection limits (RDL) and no exceedances of MTCA Method A groundwater cleanup levels (if established) at UKMW-1; 1,2,4-trimethylbenzene (1,2,4-TMB) was reported at 0.390 $\mu\text{g/L}$ (an estimated value above the method detection limit [MRL] but less than the RDL). 1,2,4-TMB was similarly quantified in the trip blank (reported at 0.489 $\mu\text{g/L}$). There is no MTCA Method A groundwater cleanup level or MCL established for 1,2,4-TMB.

Various VOC were reported in the groundwater sample at UKMW-5, including chlorobenzene (quantified at 109 $\mu\text{g/L}$) which exceeded its MCL (100 $\mu\text{g/L}$). There is no MTCA Method A groundwater cleanup level established for chlorobenzene. Pertinent data is presented in **Table 3, Summary of Groundwater Gauging and Laboratory Analytical Data (June 2019)** and on **Figure 4, Groundwater Conditions Map (06/13/19)**. Cumulative groundwater results are presented in **Table 4, Summary of Historical Groundwater Gauging and Laboratory Analytical Data**. Groundwater elevation, depth to groundwater and COC attenuation graphs are included in **Appendix D**.

Purge and decontamination rinse water from the June 2019 groundwater sampling activities (a total of approximately 2.5 gallons) was added to an existing drum containing purge/decontamination water staged near the northeast corner of the auto detailing building at 812 West Columbia Drive (pending waste profile, acceptance and disposal).

2.2 Limited Subsurface Investigation

On June 27 and 28, 2019, ATC oversaw drilling and soil sampling activities intended to provide current data at areas where, historically, MTCA Method A soil cleanup levels had been exceeded.

Drilling services were provided by Cascade Drilling based in Tacoma, Washington. Five soil borings were advanced to a maximum targeted depth of 10 feet bgs, denoted as CB-1 through CB-5 (**Figure 3**). All borings were initially cleared to a depth of five feet bgs with hand auger and/or air knife; all soil samples collected within the first five feet were collected via hand auger in general accordance with ATC's SOP - Hand Auger Drilling and Soil Sampling (**Appendix A**). Once cleared to approximately five feet bgs, Cascade advanced the borings utilizing a track-mounted rotosonic drill rig, with subsequent soil samples collected in general accordance with ATC's SOP - Rotosonic Drilling and Soil Sampling (**Appendix A**). None of the borings encountered groundwater.

Soil boring locations (and their intended objectives) drilled during this limited subsurface investigation were as follows:

- Drilled 22 degrees off vertical toward the south (to allow for sufficient clearance with overhead electric lines), boring **CB-1** was intended to yield data at the locations and depths of historical soil samples collected at the time UKMW-5 was drilled. **CB-1** was sampled at six depths between two and 10 feet bgs. Field screening of soil samples utilizing a photoionization detector (PID; in general accordance with ATC's SOP – Field Soil Vapor and Metals Monitoring, **Appendix A**) indicated no significant VOC impacts between ground surface and approximately 5.5 feet bgs, where PID readings increased significantly (to 450.2 parts per million by volume [ppmV]). The PID readings peaked at approximately six feet bgs (588.8 ppmV) and decreased at eight feet bgs (157.6 ppmV) and 10 feet bgs (196.3 ppmV).
- Vertically drilled boring **CB-2** targeted the historical boring **SB-5** and its associated sample (OS@2.5'). There were no significant PID readings observed at this location.
- Vertically drilled boring **CB-3** targeted the historical boring **SB-1**. There were no significant PID readings observed at this location.
- Borings **CB-4** and **CB-5** were drilled to provide lateral definition of impacts to the northwest and west, respectively (as limited by the building at 812 West Columbia Drive). **CB-4** was drilled vertically, while **CB-5** was drilled approximately 25 degrees off vertical toward the south (to allow for sufficient clearance with overhead electric lines). While there were no significant PID readings observed at **CB-4**, there was an anomalous PID spike (437 ppmV) at approximately six feet bgs at **CB-5**.

Soil boring logs and the key to symbols and descriptions are presented in **Appendix E**. Surface cover at all five boring locations was crushed rock gravel (vehicles in various states of operability are parked on this lot north of the building at 812 West Columbia Drive). The gravel was underlain by silty sand to varying depths between approximately 4.5 feet and eight feet bgs, which was underlain by gravel/gravel and cobbles with sand to the maximum depth explored (10 feet bgs).

Select soil samples were submitted to Pace Analytical in Mt. Juliet, Tennessee. All submitted samples were analyzed for semi-volatile organic compounds which include polynuclear aromatic hydrocarbons (PAH) utilizing EPA Method 8270D-SIM; select samples were additionally analyzed for VOC utilizing EPA Method 8260C and for polychlorinated biphenyls (PCB) utilizing EPA Method 8082A. The laboratory analytical report (for the soil samples obtained during the LSI) with chain of custody document is included in **Appendix F** and select results are presented in **Table 1**.

Investigation derived waste generated during the LSI was placed in 55-gallon steel drums with contents and generation date(s) included on the label. Approximately ½ of one drum was utilized for soil (approximately 3.5 cubic feet) and the rinse/decontamination water was added to the existing drum containing purge water (containing an approximate volume of 20 gallons). The drum containing soil cuttings was staged adjacent to the rinse/decontamination/well purge water drum near the northeast corner of the auto detailing building at 812 West Columbia Drive (pending waste profile, acceptance and disposal).

3.0 LABORATORY QUALITY ASSURANCE/QUALITY CONTROL

All groundwater and soil samples were analyzed by Pace Analytical. ATC reviewed the laboratory analytical data to determine if the data quality is sufficient for its intended purposes. The purpose of the data collected during this investigation was to evaluate groundwater concentrations (to identify any COC approaching or exceeding MTCA Method A groundwater cleanup levels or MCL) and to evaluate current soil concentrations with historical locations and depths with documented MTCA Method A soil cleanup level exceedances. The data is of adequate quality and of sufficient accuracy, precision and sensitivity for the intended purposes.

4.0 CONCLUSIONS

Based on the results of the investigation, the following conclusions are offered (with respect to VOC, and, in particular, chlorobenzene):

- Chlorobenzene remains the only dissolved phase COC in groundwater, as reported at well UKMW-5. Chlorobenzene has exceeded its MCL in two of the five most recent groundwater sampling events. The reported concentrations alternate with results not exceeding MDL (less than 0.348 µg/L, as reported in September 2018 and March 2019).
- Chlorobenzene was not quantified in soil samples analyzed during the June 2019 LSI; boring **CB-1** was drilled adjacent (approximately five feet northeast) relative to UKMW-5, and soil samples analyzed for VOC at approximate depths of five feet bgs, six feet bgs and 9.5 feet bgs did not contain chlorobenzene at or exceeding its MDL (0.00299 mg/kg, 0.0212 mg/kg and 0.00256 mg/kg, respectively). This data suggests that chlorobenzene (as reported in groundwater at UKMW-5) is not likely leaching from the overlying soil.

ATC calculated the total concentration of the seven carcinogenic PAH (cPAH) using the toxicity equivalency factors provided in Washington Administrative Code 173-340-708. The cPAH constituents included benzo(a)pyrene; benzo(a)anthracene; benzo(b)fluoranthene; benzo(k)fluoranthene; chrysene; dibenz(a,h)anthracene; and, indeno(1,2,3-cd)pyrene. The calculated results (for all available soil data) are presented in **Table 5, Summary of Soil cPAH Calculations**. ATC offers the following conclusions with respect to cPAH:

- Soil samples at boring **CB-1** did not contain cPAH exceeding the MTCA Method A soil cleanup standard (established at 0.1 mg/kg) for benzo(a)pyrene equivalents. This addresses the historical risk exposure concern with the soil samples at (UK)MW-5 (from 2008).
- There remains a cPAH exceedance of MTCA Method A soil cleanup standard at boring **CB-2** at an approximate depth of 2.5 feet bgs; the benzo(a)pyrene equivalents calculated concentration was 3.75 mg/kg. The calculated concentration decreased to 0.0739 mg/kg (less than the MTCA Method A soil cleanup standard) in the sample collected at an approximate depth of five feet bgs. This demonstrates that the historical risk exposure concern at **SB-5** (sample OS@2.5') continues to persist.
- There were no cPAH constituents exceeding their MDL in the samples analyzed at **CB-3**. This addresses the historical risk exposure concern with the soil samples at **SB-1** (from 2002).
- There were no cPAH constituents exceeding their MDL in the soil samples analyzed at **CB-4** and **CB-5**, providing lateral definition in soil to the west and northwest.
- The calculated cPAH result for the historical soil sample collected in 2008 during drilling activities at UKMW-6 (sample MW6@10') yielded a benzo(a)pyrene equivalents concentration of 0.121 mg/kg, exceeding the MTCA Method A cleanup level (0.1 mg/kg).
- PAH/cPAH in groundwater is not a concern, as presented in the Work Plan (ATC, 2018).

ATC offers the following conclusions with respect to PCB:

- The PCB mixtures (sum) at **CB-1** (approximately six feet bgs, CB-1-6), quantified at 1.04 mg/kg, slightly exceeded the MTCA Method A soil cleanup standard (established at 1 mg/kg). The deeper sample analyzed for PCB at this boring (CB-1-9.5, collected at approximately 9.5 feet bgs) yielded a result of 0.107 mg/kg, indicating that the PCB concentrations exceeding the applicable cleanup level do not extend to 9.5 feet bgs.
- PCB was not reported at or exceeding its MDL in groundwater samples between April 2018 and March 2019, including (specifically) four events at well UKMW-5, suggesting that the PCB in the soil at six feet bgs at **CB-1** is not leaching to groundwater.

5.0 RECOMMENDATIONS

ATC offers the following recommendations based on the conclusions presented above and the available historical reports:

- Shallow excavations with soil confirmation sampling at the following locations:
 - **CB-1** (adjacent to UKMW-5), to remove the PCB impacts quantified at six feet bgs.
 - **CB-2/SB-5**, to remove the cPAH impacts quantified at 2.5 feet bgs.
 - UKMW-6, to evaluate and remove soil (as necessary) to address the cPAH benzo(a)pyrene equivalents at 10 feet bgs. As future use of UKMW-6 is limited to groundwater gauging (no plans or need for additional sampling or analyses) there is no compelling reason this well needs to be retained.
- The proposed excavations are intended to remediate COC in soil (cPAH and PCB). COC in groundwater is limited to chlorobenzene. Therefore, quarterly groundwater monitoring will continue (gauging all accessible wells, low-flow purge and sample at compliance wells UKMW-1 and UKMW-5) for three additional quarters (through first quarter 2020).

6.0 REFERENCES

- ATC Group Services LLC, 2018. Site Assessment Work Plan. August 29.
- Blaes Environmental Management, Inc., 2002. Additional Soil Sampling and Groundwater Monitoring Report. May 29.

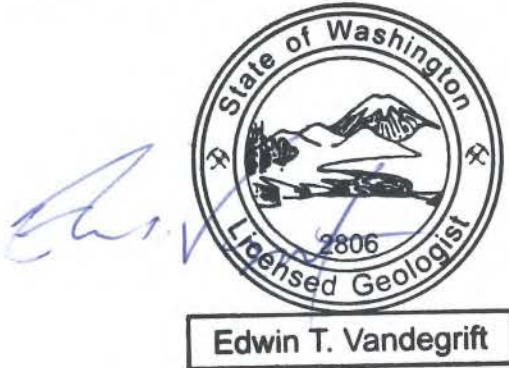
7.0 LIMITATIONS AND CERTIFICATION

The interpretation of data and the findings and conclusions presented in this Groundwater Monitoring and Limited Subsurface Investigation Report are based on professional opinions and experience with regard to the subject matter. These findings and conclusions have been developed in accordance with currently accepted geological and engineering standards and practices applicable to this location. No warranty or guarantee, whether expressed or implied, is made with respect to the data or reported findings or conclusions, which are based solely upon the reported site conditions in existence at the time of the referenced field investigations.

GROUNDWATER MONITORING AND LIMITED SUBSURFACE INVESTIGATION REPORT

Former U-Haul Facility No. 615081
800-812 West Columbia Drive
Kennewick, Washington 99336

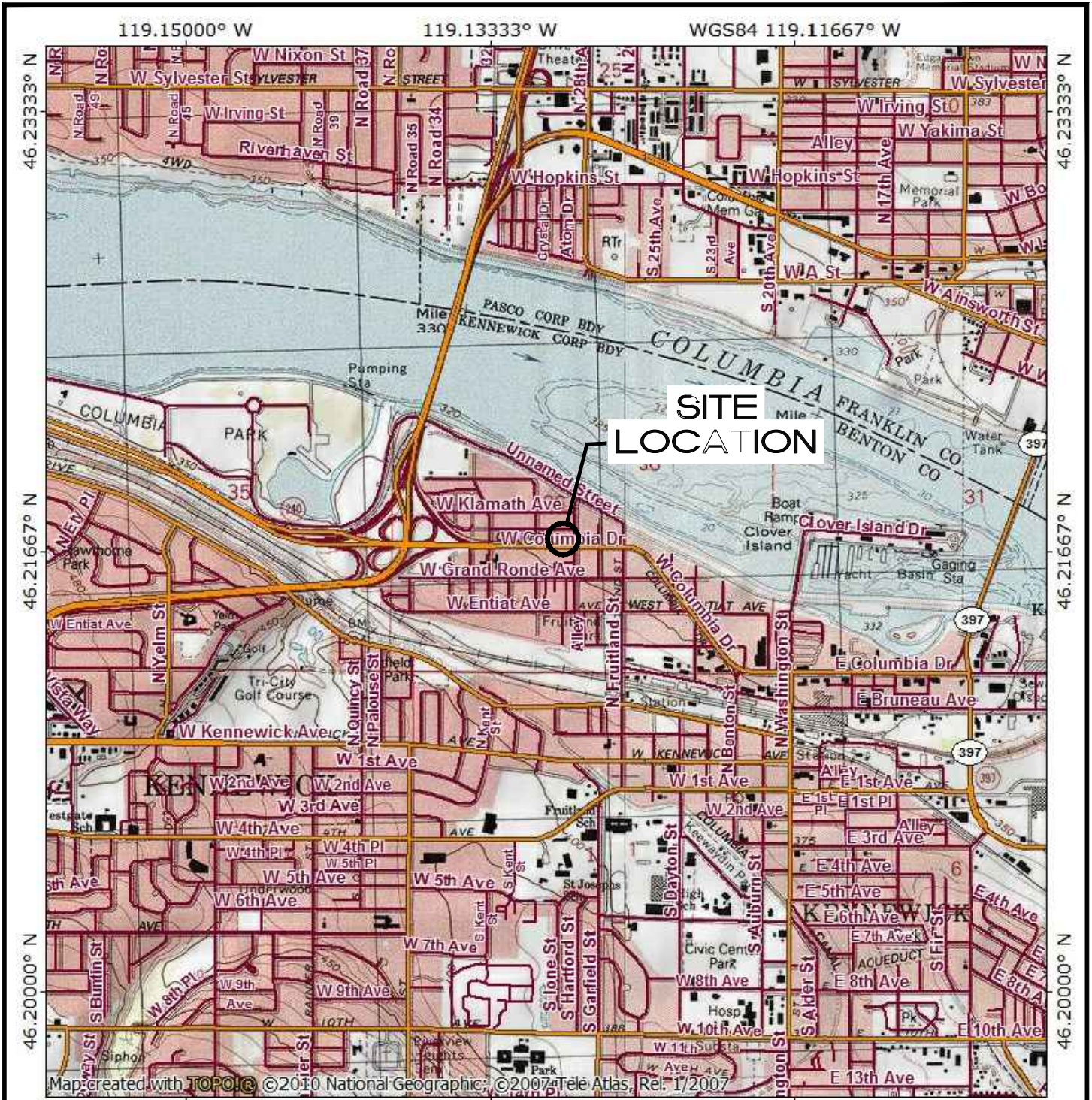
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information.



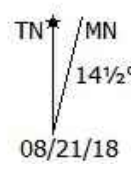
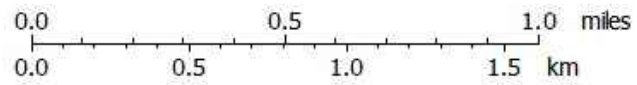
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Senior Project Manger
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Figures





Map created with TOPO! © 2010 National Geographic; © 2007 Tele Atlas, Rel. 1/2007



SOURCE: USGS TOPO MAP, KENNEWICK & PASCO, WA QUADS, 1992

SITE VICINITY MAP

FORMER U-HAUL FACILITY NO. 615081
 802-812 W. COLUMBIA DRIVE
 KENNEWICK, WA 99336

PROJECT NUMBER: 1052508102	DATE: 9/11/19	FIGURE
APPROVED BY: EV	DRAWN BY: BK	1



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LEGEND

⊕ GROUNDWATER MONITOR WELL



-PPROX. SCALE, FT

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE. WELL LOCATIONS BASED ON 05/31/18 SURVEY DATA (CRANES LAND SURVEYORS).

SITE PLAN

FORMER U-HAUL FACILITY NO. 615081
800-812 W. COLUMBIA DRIVE
KENNEWICK, WA 99336

PROJECT NUMBER: 1052508102

DATE: 6/11/19

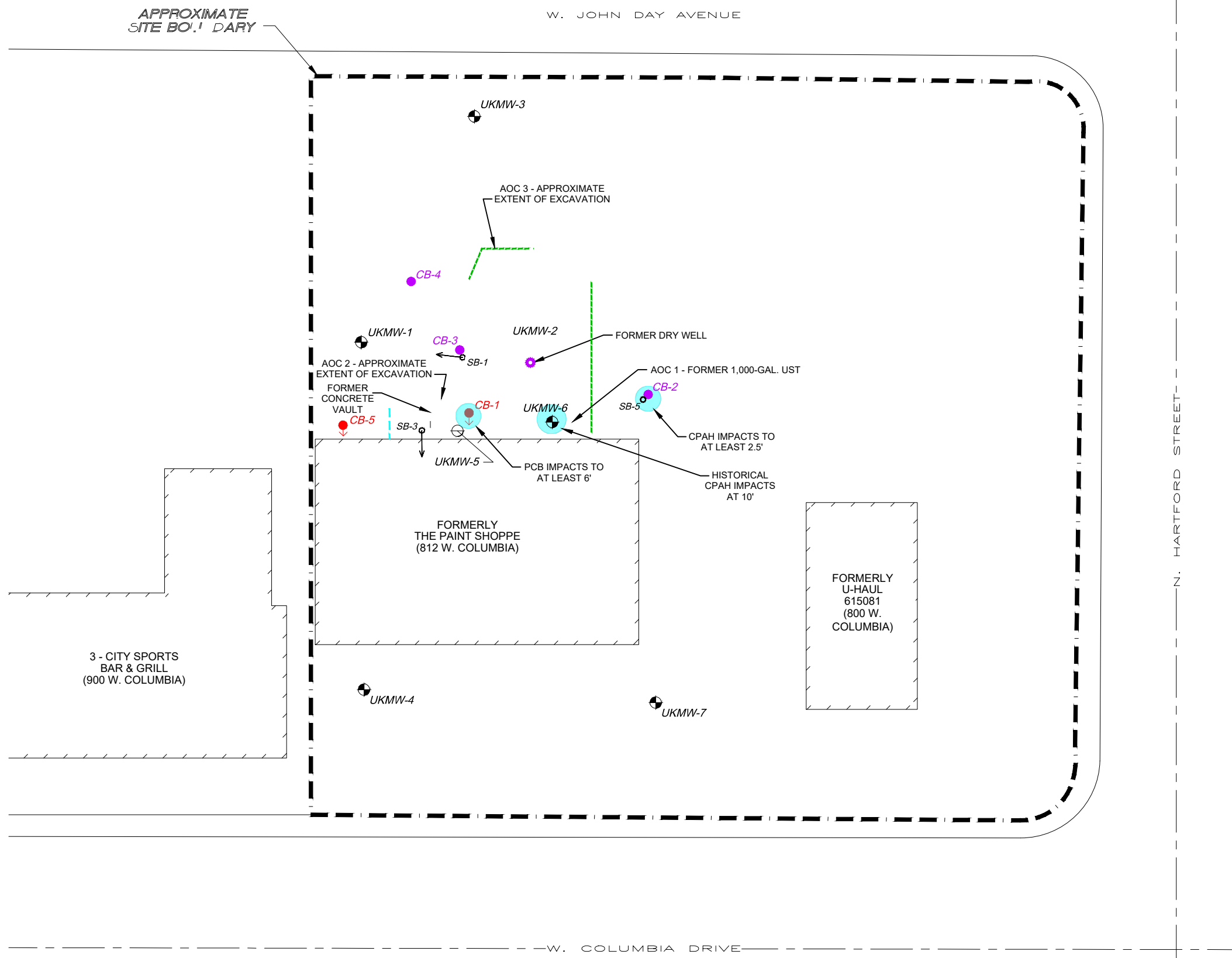
FIGURE 2



APPROVED BY: EV
9185 S. Farmer Ave., Ste. #111
Tempe, A

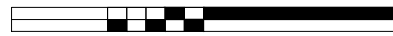
DRAWN BY: BK

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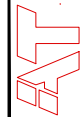
LEGEND

- AOC AREA OF CONCERN
- GROUNDWATER MONITOR WELL
- VERTICAL CONFIRMATION BORING
- ANGLED CONFIRMATION BORING & TREND DIRECTION
- ANGLED SOIL BORING (2002) & TREND DIRECTION
- SOIL BORING (2002)
- APPROXIMATE EXTENT OF CHEMICALS OF CONCERN (CARCINOGENIC PAH OR PCB) IN SOIL

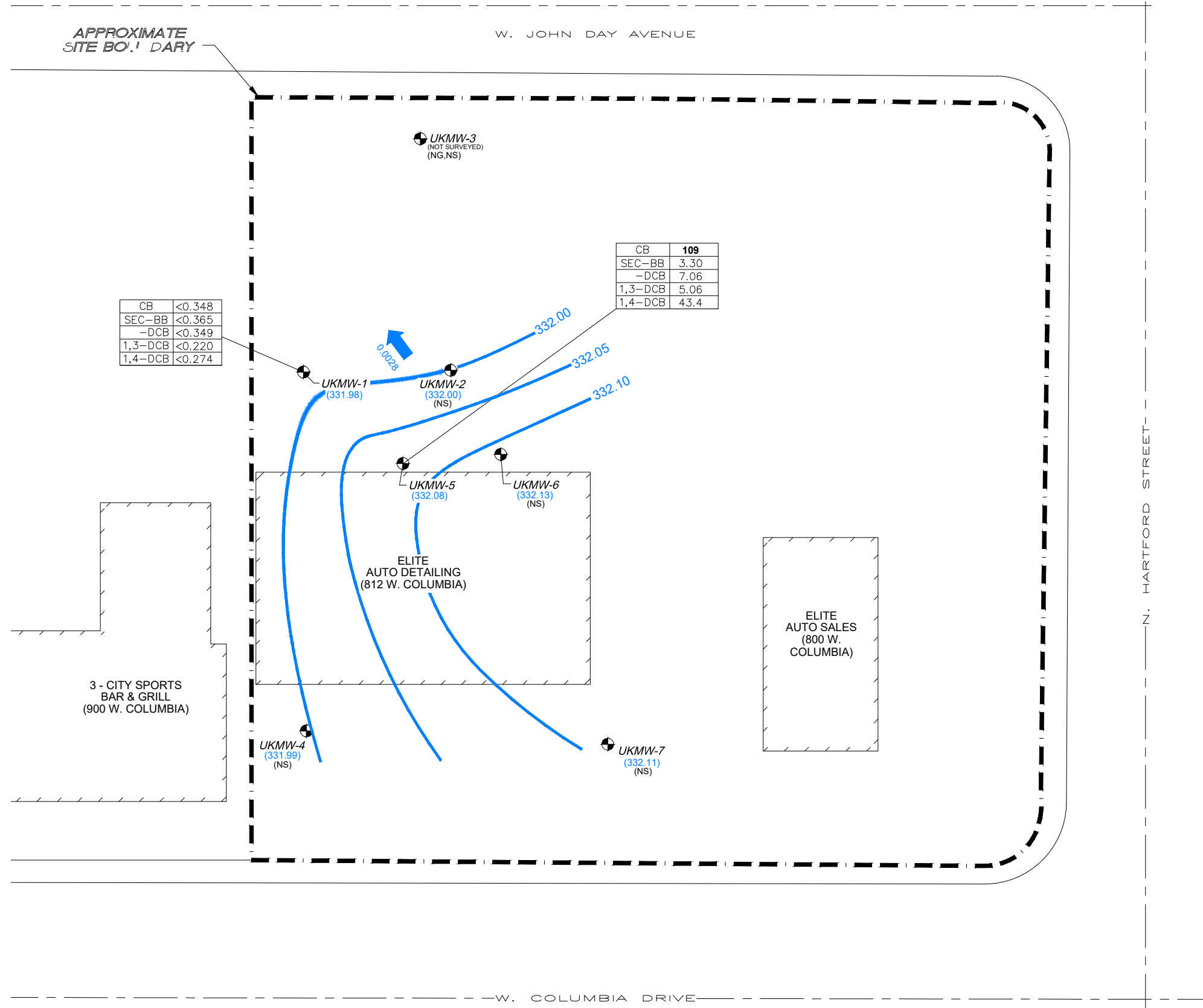


-PPROX. SCALE, FT

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE

PROJECT NUMBER: 1052508102	DATE: 6/11/19	FIGURE
APPROVED BY: EV	DRAWN BY: BK	3
		
9185 S. Farmer Ave., Ste. #111 Tempe, AZ		

CONFIRMATION BORING LOCATIONS
 FORMER U-HAUL FACILITY NO. 615081
 800-812 W. COLUMBIA DRIVE
 KENNEWICK, WA 99336



CB	<0.348
SEC-BB	<0.365
-DCB	<0.349
1,3-DCB	<0.220
1,4-DCB	<0.274

CB	109
SEC-BB	3.30
-DCB	7.06
1,3-DCB	5.06
1,4-DCB	43.4

LEGEND

- GROUNDWATER MONITOR WELL
- (331.98)** GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- 332.00** GROUNDWATER ELEVATION CONTOUR (FEET ABOVE MEAN SEA LEVEL)
- GROUNDWATER GRADIENT (FT/FT)
- 0.0028**

CB	<0.348	CHLOROBENZENE
SEC-BB	<0.365	SEC-BUTYLBENZENE
-DCB	<0.349	1,2-DICHLOROBENZENE
1,3-DCB	<0.220	1,3-DICHLOROBENZENE
1,4-DCB	<0.274	1,4-DICHLOROBENZENE

BOLD RESULTS EXCEED MTCA METHOD B CLEANUP LEVEL OR WASHINGTON MCL (WHERE APPLICABLE)

(NS) NOT SAMPLED
(NG) NOT GAUGED
ALL ANALYTICAL RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)



-PPROX. SCALE, FT

NOTE: SCALE AND LOCATIONS ARE APPROXIMATE. WELL LOCATIONS BASED ON 05/31/18 SURVEY DATA (CRONES LAND SURVEYORS).

**GROUNDWATER CONDITIONS MAP
(06/13/19)**

FORMER U-HAUL FACILITY NO. 615081
800-812 W. COLUMBIA DRIVE
KENNEWICK, WA 99336

PROJECT NUMBER: 1052508106
APPROVED BY: EV
DATE: 9/11/19
DRAWN BY: BK

9185 S. Farmer Ave., Ste. #111
Tempe, AZ



FIGURE
4

Tables



TABLE 1
SUMMARY OF SELECT SOIL LABORATORY ANALYTICAL DATA
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Soil Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Chlorobenzene	sec-Butylbenzene	Carbon Disulfide	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Naphthalene	n-Propylbenzene	Other VOC*	Anthracene	Acenaphthene	Benzo(a)anthracene	Benzo(b)pyrene	Benzo(k)fluoranthene	Benzo(e)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluorene	Fluoranthene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene	PCB Mixtures		
		Volatile Organic Compounds														Semi Volatile Organic Compounds and Polynuclear Aromatic Hydrocarbons												PCBs				
EPA Method 8260B, 8260C															EPA Method 8270 modified, 8270M-SIM, 8270C and/or 8270D-SIM												EPA Method 8082 A					
All results reported in milligrams per kilogram (mg/kg).																																
Model Toxics Control Act (MTCA) Method A Cleanup Levels for Soil (Unrestricted Land Use)	0.03	7	6	9	0.1	NE	NE	NE	NE	NE	5	NE	Various	NE	NE	NE	0.1	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	5	NE	1		
MTCA Method B Cleanup Levels (Carcinogenic/Non-carcinogenic) for Soil	18.2 / 320	NE / 6,400	NE / 8,000	NE / 16,000	560 / NE	NE / 1,600	NE / 8,000	NE / 8,000	NE / 7,200	185 / 5,600	NE / 1,600	NE / 8,000	Various	NE / 24,000	NE / 4,800	1.37 / NE	0.137 / NE	1.37 / NE	13.7 / NE	137 / NE	0.137 / NE	NE / 3,200	NE / 3,200	1.37 / NE	34 / 5,600	NE / 320	NE / 1,600	NE / 2,400	0.5 / NE			
Blaes Environmental Management, Inc. Soil Sampling - May 2002																																
SB1@5'	05/03/02	<0.100	<0.100	<0.100	<0.300	---	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	None	0.0765	0.0109	0.695	0.800	0.742	0.770	0.927	0.235	0.0258	1.67	0.603	---	---	<0.0100	1.22	<0.0500			
SB1@8.5'	05/03/02	<0.100	<0.100	<0.100	<0.300	---	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	None	0.394	0.144	2.90	3.02	2.58	2.81	3.35	0.773	0.144	5.86	1.92	---	---	<0.100	4.64	<0.0500			
SB3@5'	05/03/02	<0.100	<0.100	<0.100	<0.300	---	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	None	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	---	---	<0.0100	<0.0100	<0.0500			
OS@2.5'	05/03/02	---	---	---	---	---	---	---	---	---	---	---	---	<0.0100	<0.0100	0.100	0.138	0.150	0.135	0.135	0.0481	<0.0100	0.213	0.132	---	---	<0.0100	0.191	---			
Blaes Environmental Management, Inc. Soil Sampling - June 2008																																
MW5@8'	06/11/08	<0.0219	<0.11	<0.11	<0.329	<0.110	<0.11	<0.11	<1.11	1.12	0.621	<0.219	<0.11	None	<0.0296 / <0.363	<0.0296 / <0.363	0.0951 / <0.363	0.0926 / <1.82	0.0995 / <1.82	0.0863 / <1.82	0.119 / 0.390	<0.0296 / <1.82	<0.0296 / <0.363	0.213 / 0.784	0.0695 / <1.82	--- / <0.363	--- / <0.363	0.0384 / <0.363	0.219 / 0.479	0.413 (Aroclor 1232)		
MW5@10'	06/11/08	<0.022	<0.11	<0.11	<0.33	<0.11	<0.11	<0.11	<1.11	0.163	<0.11	<0.22	<0.11	None	0.0410 / <0.362	<0.0297 / <0.362	0.200 / <0.362	0.185 / <1.81	0.187 / <1.81	0.175 / <1.81	0.241 / <0.362	0.0439 / <1.81	<0.0297 / <0.362	0.479 / 0.610	0.127 / <1.81	--- / <0.362	--- / <0.362	0.0323 / <0.362	0.450 / 0.369	0.293 (Aroclor 1232)		
MW6@8'	06/12/08	<0.022	<0.11	<0.11	<0.33	<0.11	<0.11	<0.11	<1.11	<0.11	<0.11	<0.22	<0.11	None	<0.0154 / <0.381	<0.0154 / <0.381	0.0515 / <0.381	0.0678 / <0.762	0.0651 / <0.762	0.0615 / <0.762	0.0693 / <0.381	<0.0154 / <0.762	<0.0154 / <0.381	0.110 / <0.381	0.0536 / <0.762	--- / <0.381	--- / <0.381	<0.0154 / <0.381	0.102 / <0.381	<0.0383 or <0.0770		
MW6@10'	06/12/08	<0.0225	<0.112	<0.112	<0.337	<0.112	<0.112	<0.112	<1.12	<0.112	<0.112	<0.225	<0.112	None	<0.0301 / <0.369	<0.0301 / <0.369	0.0713 / <0.369	0.0879 / <1.84	0.0970 / <1.84	0.0879 / <1.84	0.0974 / <0.369	<0.0301 / <1.84	<0.0301 / <0.369	0.161 / <0.369	0.0670 / <1.84	--- / <0.369	--- / <0.369	<0.0301 / <0.369	0.153 / <0.369	<0.0369 or <0.0742		
MW7@10'	06/11/08	<0.0212	<0.106	<0.106	<0.318	<0.106	<0.106	<0.106	<1.06	<0.106	<0.106	<0.212	<0.106	None	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	--- / <0.356	--- / <0.356	<0.0144 / <0.356	<0.0144 / <0.356	<0.0359 or <0.0722		
ATC Group Services LLC Soil Sampling - June 2019																																
CB-1-5	06/27/19	<0.00119	<0.00597	<0.00299	<0.00776	<0.00119	<0.00299	<0.0149	---	<0.00597	<0.00597	0.00953 J	<0.00597	None	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	---
CB-1-6	06/28/19	<0.00846	<0.0423	<0.0212	<0.0550	<0.00846	<0.0212	0.248	---	<0.0423	0.294	0.365 J	<0.0423	None	0.0383	0.0389	0.000670 J	0.0193	<0.00635	<0.00635	0.0105	<0.00635	0.0385	0.0145	0.00141 J	0.665	0.00212 J	0.295	0.0450	1.04		
CB-1-8	06/28/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	0.0138	<0.00638	0.0851	0.0225	<0.00638	2.71	0.662	1.66	0.0430	---		
CB-1-9.5	06/28/19	<0.00102	<0.00512	<0.00256	<0.00665	<0.00102	<0.00256	0.0136	---	0.0284	0.0454	0.0709 J	<0.00512	None	0.00602 J	0.00825	<0.00614	0.000618 J	<0.00614	0.00102 J	<0.00614	<0.00614	0.0101	0.00248 J	<0.00614	0.190	0.156	0.0634	0.00472 J	0.107		
CB-2-2.5	06/28/19	---	---	---	---	---	---	---	---	---	---	---	---	---	0.479	0.0144	4.26	2.69	3.62	1.03	4.98	0.329	0.0147	6.37	0.899	<0.0223	<0.0223	<0.0223	8.67	---		
CB-2-5	06/28/19	---	---	---	---	---	---	---	---	---	---	---	---	---	0.00303 J	<0.00668	0.0384	0.0539	0.0838	0.0232	0.0501	0.00993	0.000871 J	0.0873	0.0392	<0.0223	<0.0223	<0.0223	0.0700	---		
CB-2-9.5	06/28/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.00635	<0.0212	<0.0212	<0.0212	<0.00635	---	
CB-3-5	06/27/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	<0.00699	---	
CB-3-8.5	06/27/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	<0.00623	---	
CB-3-9.5	06/27/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	<0.00638	---	
CB-4-5	06/27/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	<0.00712	---	
CB-4-9.5	06/27/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	<0.00622	---	
CB-5-5	06/27/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	<0.00716	---	
CB-5-6	06/28/19	<0.00122	<0.00608	<0.00304	<0.00791	<0.00122	<0.00304	<0.0152	---	<0.00608	<0.00608	<0.0152	<0.00608	None	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	<0.00730	---	
CB-5-9.5	06/28/19	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	<0.00617	---	

TABLE 1
SUMMARY OF SELECT SOIL LABORATORY ANALYTICAL DATA
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Soil Sample ID	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Chlorobenzene	sec-Butylbenzene	Carbon Disulfide	1,2-Dichlorobenzene	1,4-Dichlorobenzene	Naphthalene	n-Propylbenzene	Other VOC*	Anthracene	Acenaphthene	Benzo(a)anthracene	Benzo(e)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluorene	Fluoranthene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Pyrene	PCB Mixtures		
		Volatile Organic Compounds													Semi Volatile Organic Compounds and Polynuclear Aromatic Hydrocarbons													PCBs				
EPA Method 8260B, 8260C															EPA Method 8270 modified, 8270M-SIM, 8270C and/or 8270D-SIM													EPA Method 8082 A				
All results reported in milligrams per kilogram (mg/kg).																																
Model Toxics Control Act (MTCA) Method A Cleanup Levels for Soil (Unrestricted Land Use)	0.03	7	6	9	0.1	NE	NE	NE	NE	NE	5	NE	Various	NE	NE	NE	0.1	NE	NE	NE	NE	NE	NE	NE	NE	NE	5	NE	1			
MTCA Method B Cleanup Levels (Carcinogenic/Non-carcinogenic) for Soil	18.2 / 320	NE / 6,400	NE / 8,000	NE / 16,000	560 / NE	NE / 1,600	NE / 8,000	NE / 8,000	NE / 7,200	185 / 5,600	NE / 1,600	NE / 8,000	Various	NE / 24,000	NE / 4,800	1.37 / NE	0.137 / NE	1.37 / NE	13.7 / NE	137 / NE	0.137 / NE	NE / 3,200	NE / 3,200	1.37 / NE	34 / 5,600	NE / 320	NE / 1,600	NE / 2,400	0.5 / NE			
Notes:	<ul style="list-style-type: none"> VOC* - Volatile organic compounds - only for constituents exceeding an MTCA soil cleanup level. PCB - Polychlorinated biphenyls. EPA - Environmental Protection Agency NE - Not established. <0.100 - Not detected above laboratory specified method detection limit (MDL) or method reporting limit (MRL). MTBE - Methyl tert butyl ether █ - Constituent quantified above laboratory specified MDL or MRL. J - Estimated concentration. <0.0296 / <0.363 - EPA Method 8270M-SIM / EPA Method 8270C Bold - Concentration equals or exceeds MTCA Method A or Method B soil cleanup level (as established by Washington State Department of Ecology). 																															

TABLE 2
SUMMARY OF GROUNDWATER FIELD PARAMETERS
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Well ID	Date	Temperature (°C)	Specific Conductance (µS/cm)	Turbidity NTU	DO (mg/L)	pH	ORP (mV)
		Field Instrumentation					
UKMW-1	04/26/18	18.21	506	---	5.51	8.50	-73.4
UKMW-1	09/11/18	20.02	655	1.17	8.12	7.42	58.1
UKMW-1	12/14/18	15.8	541.8	1.08	4.96	7.29	131.3
UKMW-1	03/05/19	14.80	523	0.02	6.60	7.09	201.3
UKMW-1	06/13/19	19.0	593	0.72	10.21	6.94	-59.6
UKMW-2	04/26/18	16.69	481	---	5.38	8.06	-39.6
UKMW-2	09/11/18	21.00	652	1.15	8.66	7.62	49.4
UKMW-2	12/14/18	16.7	577.0	1.11	2.14	7.10	138.9
UKMW-2	03/05/19	13.18	531	0.34	4.93	6.80	198.4
UKMW-3	12/14/18	17.0	547.7	2.35	3.80	7.28	128.1
UKMW-4	04/26/18	15.12	464	---	2.07	7.59	-3.2
UKMW-4	09/10/18	21.14	687	1.05	6.99	7.47	69.6
UKMW-4	12/14/18	16.1	506.3	0.72	6.60	7.29	108.7
UKMW-4	03/05/19	14.13	459	0.37	6.28	7.13	173.8
UKMW-5	04/26/18	17.00	666	---	1.42	7.93	-70.1
UKMW-5	09/11/18	19.16	652	4.02	9.76	7.61	66.2
UKMW-5	12/14/18	16.0	721	1.60	1.49	6.85	11.9
UKMW-5	03/05/19	13.01	493	4.37	5.51	6.98	180.4
UKMW-5	06/13/19	19.1	860	3.51	1.22	6.55	-79.0
UKMW-6	04/26/18	15.99	478	---	5.41	8.04	-53.3
UKMW-6	09/10/18	20.38	71.5	1.60	6.41	7.30	73.2
UKMW-6	12/14/18	16.2	563.0	2.72	4.05	7.13	109.3
UKMW-6	03/05/19	13.41	503	0.03	6.95	7.08	186.3
UKMW-7	04/26/18	15.60	480	---	5.59	7.67	1.5
UKMW-7	12/14/18	16.2	535.2	0.76	5.38	7.29	124.6
Notes:		°C	- Degrees Celsius				
		µS/cm	- Microsiemens per centimeter				
		NTU	- Nephelometric turbidity units				
		DO	- Dissolved oxygen.				
		mg/L	- Milligrams per liter.				
		ORP	- Oxidation reduction potential.				
		mV	- Millivolts				
		---	- Not analyzed, not measured or no data available.				

TABLE 3
SUMMARY OF GROUNDWATER GAUGING AND LABORATORY ANALYTICAL DATA (JUNE 2019)
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Well ID	Date	TOC Elevation (feet above MSL)	Approximate Well Depth (feet below TOC)	Top of Screen Elevation (feet above MSL)	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above MSL)	Benzene	Ethylbenzene	Chlorobenzene	sec-Butylbenzene	Carbon Disulfide	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene*	Isopropylbenzene	n-Propylbenzene	Other VOC**	Aroclor 1242	PCB Mixtures***				
							Volatile Organic Compounds																Polychlorinated Biphenyls
							EPA Method 8260B																EPA Method 8082 A
							All results reported in micrograms per liter (µg/L).																
Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater							5	700	NE	NE	NE	NE	NE	NE	NE	NE	NE	Various	NE	0.1			
MTCA Method B Cleanup Levels (Carcinogenic/Non-carcinogenic) for Groundwater							0.795 / 32.0	NE / 800	NE / 160	NE / 800	NE / 800	NE / 720	NE	8.10 / 560	NE	NE / 800	Various	NE	0.0438 / NE				
Washington Maximum Contaminant Levels (MCL) for Groundwater							5	70	100	NE	NE	600	NE	75	NE	NE	Various	NE	0.5				
UKMW-1	06/13/19	344.86	24.00	340.86	12.88	331.98	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---				
UKMW-2	06/13/19	344.18	25.16	339.18	12.18	332.00	---	---	---	---	---	---	---	---	---	---	---	---	---				
UKMW-3****	06/13/19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---				
UKMW-4	06/13/19	345.26	24.30	339.26	13.27	331.99	---	---	---	---	---	---	---	---	---	---	---	---	---				
UKMW-5	06/13/19	345.30	24.45	340.30	13.22	332.08	<0.331	<0.384	109	3.30	---	7.06	5.06	43.4	2.06	<0.349	ND	---	---				
UKMW-6	06/13/19	345.36	24.36	340.36	13.23	332.13	---	---	---	---	---	---	---	---	---	---	---	---	---				
UKMW-7	06/13/19	345.63	24.45	340.63	13.52	332.11	---	---	---	---	---	---	---	---	---	---	---	---	---				
Notes:	TOC - Top of casing. MSL - Mean sea level. * - The applicable cleanup level for 1,4-dichlorobenzene is the Maximum Contaminant Level (since 10 ⁻⁶ [Method B] < MCL < 10 ⁻⁵ [Method C]). VOC - Volatile organic compounds. ** - Only VOC exceeding MTCA Method A Cleanup Level for Groundwater or the Washington MCL (if established) are identified. PCB - Polychlorinated biphenyls. *** - PCB mixtures equals cumulative total (sum) of all Aroclor constituents. EPA - Environmental Protection Agency NE - Not established. <0.331 - Not detected above laboratory specified method detection limit (MDL). --- - Not analyzed, not measured or no data available. ND - No other constituents were quantified at, or exceeding, laboratory specified MDL. **** - Well inaccessible due to wasp nest. - Constituent quantified above laboratory specified MDL. Bold - Concentration equals or exceeds the applicable cleanup level.																						

TABLE 4
SUMMARY OF HISTORICAL GROUNDWATER GAUGING AND LABORATORY ANALYTICAL DATA
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Well ID	Date	TOC Elevation (feet above MSL) ⁽¹⁾	Approximate Well Depth (feet below TOC)	Top of Screen Elevation (feet above MSL)	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above MSL)	Gasoline	Diesel (Fuel Oil)	Heavy Oil	Benzene	Ethylbenzene	Chlorobenzene	sec-Butylbenzene	Carbon Disulfide	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene*	Isopropylbenzene	n-Propylbenzene	Other VOC**	Benzol(a)pyrene	Benzol(a)anthracene	Benzol(b)fluoranthene	Fluoranthene	Phenanthrene	Other PAH	Aroclor 1242	PCB Mixtures***		
							Total Petroleum Hydrocarbons			Volatile Organic Compounds											Polynuclear Aromatic Hydrocarbons					Polychlorinated Biphenyls				
							NWTPH-Gx	NWTPH-Dx/Dx Ext., NWTPHDx-SGT or WTPH-D Modified		EPA Method 8260 / 8021B / 8240 / 601											EPA Method 8270 (SIM) / 8270C / 8270D (SIM) / 8270 Modified					EPA Method 8082, 8081 or 8080				
							All results reported in micrograms per liter (µg/L).																							
Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater							800/1,000 ⁽²⁾	500	500	5	700	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	Various	0.10	NE	NE	NE	NE	Various	NE	0.1
MTCA Method B Cleanup Levels (Carcinogenic/Non-carcinogenic) for Groundwater							NE	NE	NE	0.795 / 32.0	NE / 800	NE / 160	NE / 800	NE / 800	NE / 720	NE	8.10 / 560	NE	NE / 800	Various	0.012 / NE	0.12 / NE	0.12 / NE	NE / 640	NE	Various	NE	0.0438 / NE		
Washington Maximum Contaminant Levels (MCL) for Groundwater							NE	NE	NE	5	70	100	NE	NE	600	NE	75	NE	NE	Various	0.2	NE	NE	NE	NE	Various	NE	0.5		
UKMW-1	06/22/93	344.86	24	340.86	10.88	333.98	---	---	---	<5	<5	<5	---	<5	---	---	---	---	---	ND	---	---	---	---	---	---	---	---		
UKMW-1	07/08/93	344.86	24	340.86	10.84	334.02	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<5	<5	<5	<5	<5	ND	---	---		
UKMW-1	11/24/93	344.86	24	340.86	10.88	333.98	---	---	<1,000	---	---	---	---	---	---	<1	---	---	---	---	---	---	---	---	---	---	<0.5	ND		
UKMW-1	04/20/01	344.86	24	340.86	11.98	332.88	<50.0	---	---	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	---	---	---	---	---	---	<0.813	ND		
UKMW-1	05/02/02 ⁽³⁾	344.86	24	340.86	12.20	332.66	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.100	<0.100	<0.100	<0.100	<0.100	ND	<0.0400	ND		
UKMW-1	05/03/02 ⁽⁴⁾	344.86	24	340.86	---	---	<100	---	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	<0.100	<0.100	<0.100	<0.100	ND	---	---		
UKMW-1	11/10/04	344.86	24	340.86	11.08	333.78	<100	---	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	<0.100	<0.100	<0.100	<0.100	ND	---	---		
UKMW-1	06/19/08	344.86	24	340.86	10.46	334.40	---	---	---	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.476	ND			
UKMW-1	09/09/08	344.86	24	340.86	10.55	334.31	---	---	---	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.154	ND			
UKMW-1	03/03/15	344.86	24	340.86	---	---	<100	---	---	<0.250	<0.500	<0.500	<1.00	---	<0.500	<0.500	<0.500	<1.00	<0.500	ND	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	ND	<0.0952	ND		
UKMW-1	12/15/17	344.86	23.98	340.86	13.31	331.55	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UKMW-1	04/26/18	344.86	24.00	340.86	11.97	332.89	---	<66.7	<83.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UKMW-1	09/11/18	344.86	24.00	340.86	11.64	333.22	---	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-1	12/14/18	344.86	24.00	340.86	13.61	331.25	---	---	---	<0.331	<0.384	<0.348	<0.365	<0.275	<0.349	<0.220	<0.274	---	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-1	03/05/19	344.86	24.00	340.86	15.11	329.75	---	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-1	06/13/19	344.86	24.00	340.86	12.88	331.98	---	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	---	---		
UKMW-2	06/22/93	344.18	25	339.18	10.16	334.02	---	---	---	<5	<5	<5	---	<5	---	---	---	---	---	ND	---	---	---	---	---	---	---	---		
UKMW-2	07/08/93	344.18	25	339.18	10.12	334.06	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<5	<5	<5	<5	<5	ND	---	---		
UKMW-2	11/24/93	344.18	25	339.18	10.16	334.02	---	---	<1,000	---	---	---	---	---	---	<1	---	---	---	---	---	---	---	---	---	---	<0.5	ND		
UKMW-2	04/20/01	344.18	25	339.18	11.26	332.92	---	---	---	<0.500	<0.500	<1.00	<1.00	2.42	<1.00	<1.00	<1.00	<1.00	<1.00	ND	---	---	---	---	---	---	<0.813	ND		
UKMW-2	05/02/02 ⁽³⁾	344.18	25	339.18	11.48	332.70	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.100	<0.100	<0.100	<0.100	<0.100	ND	<0.0400	ND		
UKMW-2	05/03/02 ⁽⁴⁾	344.18	25	339.18	---	---	<100	---	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	<0.100	<0.100	<0.100	<0.100	ND	---	---		
UKMW-2	11/10/04	344.18	25	339.18	10.36	333.82	<100	---	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	<0.100	<0.100	<0.100	<0.100	ND	---	---		
UKMW-2	06/19/08	344.18	25	339.18	9.74	334.44	---	---	---	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.476	ND		
UKMW-2	09/09/08	344.18	25	339.18	9.83	334.35	---	---	---	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.100	ND		
UKMW-2	03/03/15	344.18	25	339.18	---	---	<100	---	---	<0.250	<0.500	<0.500	<1.00	---	<0.500	<0.500	<0.500	<1.00	<0.500	ND	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	ND	<0.0952	ND		
UKMW-2	12/15/17	344.18	25.08	339.18	12.28	331.90	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UKMW-2	04/26/18	344.18	25.16	339.18	11.24	332.94	---	<66.7	<83.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UKMW-2	09/11/18	344.18	25.16	339.18	10.90	333.28	---	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-2	12/14/18	344.18	25.16	339.18	12.90	331.28	---	---	---	<0.331	<0.384	<0.348	<0.365	<0.275	<0.349	<0.220	<0.274	---	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-2	03/05/19	344.18	25.16	339.18	14.37	329.81	---	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-2	06/13/19	344.18	25.16	339.18	12.18	332.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		

TABLE 4
SUMMARY OF HISTORICAL GROUNDWATER GAUGING AND LABORATORY ANALYTICAL DATA
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Well ID	Date	TOC Elevation (feet above MSL) ⁽¹⁾	Approximate Well Depth (feet below TOC)	Top of Screen Elevation (feet above MSL)	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above MSL)	Gasoline	Diesel (Fuel Oil)	Heavy Oil	Benzene	Ethylbenzene	Chlorobenzene	sec-Butylbenzene	Carbon Disulfide	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene*	Isopropylbenzene	n-Propylbenzene	Other VOC**	Benzo(a)pyrene	Benzo(a)anthracene	Benzo(b)fluoranthene	Fluoranthene	Phenanthrene	Other PAH	Aroclor 1242	PCB Mixtures***	
							Total Petroleum Hydrocarbons			Volatile Organic Compounds											Polynuclear Aromatic Hydrocarbons					Polychlorinated Biphenyls			
							NWTPH-Gx	NWTPH-Dx/Dx Ext., NWTPHDx-SGT or WTPH-D Modified		EPA Method 8260 / 8021B / 8240 / 601											EPA Method 8270 (SIM) / 8270C / 8270D (SIM) / 8270 Modified					EPA Method 8082, 8081 or 8080			
							All results reported in micrograms per liter (µg/L).																						
Model Toxics Control Act (MTC) Method A Cleanup Levels for Groundwater							800/1,000 ⁽²⁾	500	500	5	700	NE	NE	NE	NE	NE	NE	NE	NE	NE	Various	0.10	NE	NE	NE	NE	Various	NE	0.1
MTC Method B Cleanup Levels (Carcinogenic/Non-carcinogenic) for Groundwater							NE	NE	NE	0.795 / 32.0	NE / 800	NE / 160	NE / 800	NE / 800	NE / 720	NE	8.10 / 560	NE	NE / 800	Various	0.012 / NE	0.12 / NE	0.12 / NE	NE / 640	NE	Various	NE	0.0438 / NE	
Washington Maximum Contaminant Levels (MCL) for Groundwater							NE	NE	NE	5	70	100	NE	NE	600	NE	75	NE	NE	Various	0.2	NE	NE	NE	NE	Various	NE	0.5	
UKMW-3	06/22/93	---	25	---	10.04	---	---	---	<5	<5	<5	---	<5	---	---	---	---	---	---	ND	---	---	---	---	---	---	---	---	
UKMW-3	07/08/93	---	25	---	10.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<5	<5	<5	<5	<5	ND	---	---	
UKMW-3	11/24/93	---	25	---	10.03	---	---	<1,000	---	---	---	---	---	---	---	<1	---	---	---	---	---	---	---	---	---	<0.5	ND		
UKMW-3	04/20/01	---	25	---	11.17	---	<50.0	---	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	---	---	---	---	---	---	<0.833	ND		
UKMW-3	05/02/02 ⁽³⁾	---	25	---	11.39	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.100	<0.100	<0.100	<0.100	<0.100	ND	<0.0400	ND	
UKMW-3	05/03/02 ⁽⁴⁾	---	25	---	---	---	<100	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	<0.100	<0.100	<0.100	<0.100	ND	---	---		
UKMW-3	11/10/04	---	25	---	10.28	---	<100	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	<0.100	<0.100	<0.100	<0.100	ND	---	---		
UKMW-3	06/19/08	---	25	---	9.66	---	---	---	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.476	ND			
UKMW-3	09/09/08	---	25	---	9.75	---	---	---	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.100	ND			
UKMW-3	12/14/18	---	25	---	12.79	---	---	---	<0.331	<0.384	<0.348	<0.365	<0.275	<0.349	<0.220	<0.274	---	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-4	11/24/93	345.26	24	339.26	11.30	333.96	---	---	<1,000	---	---	---	---	---	<1	---	---	---	---	---	---	---	---	---	---	<0.5	<0.5		
UKMW-4	04/20/01	345.26	24	339.26	12.39	332.87	55.9	---	---	<0.500	<0.500	<1.00	<1.00	1.37	<1.00	<1.00	<1.00	<1.00	ND	---	---	---	---	---	---	<0.943	ND		
UKMW-4	05/02/02 ⁽³⁾	345.26	24	339.26	12.59	332.67	---	---	---	---	---	---	---	---	---	---	---	---	---	---	<0.100	<0.100	<0.100	<0.100	<0.100	ND	<0.0400	ND	
UKMW-4	05/03/02 ⁽⁴⁾	345.26	24	339.26	---	---	<100	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	<0.100	<0.100	<0.100	<0.100	ND	---	---			
UKMW-4	11/10/04	345.26	24	339.26	11.49	333.77	<100	---	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<0.100	0.464	0.502	0.135	0.348	ND	---	---			
UKMW-4	06/19/08	345.26	24	339.26	10.86	334.40	---	---	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.476	ND		
UKMW-4	09/09/08	345.26	24	339.26	10.93	334.33	---	---	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.100	ND			
UKMW-4	03/03/15	345.26	24	339.26	---	---	<100	---	<0.250	<0.500	<0.500	<1.00	---	<0.500	<0.500	<0.500	<1.00	<0.500	ND	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	ND	<0.0943	ND		
UKMW-4	12/15/17	345.26	23.80	339.26	13.43	331.83	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UKMW-4	04/26/18	345.26	24.30	339.26	12.36	332.90	---	<66.7	<83.3	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	<0.0116	<0.00410	<0.00212	<0.0157	<0.00820	Naphthalene 0.0272	<0.0470	<0.0420	
UKMW-4	09/10/18	345.26	24.30	339.26	11.98	333.28	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-4	12/14/18	345.26	24.30	339.26	13.99	331.27	---	---	<0.331	<0.384	<0.348	<0.365	<0.275	<0.349	<0.220	<0.274	---	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-4	03/05/19	345.26	24.30	339.26	15.50	329.76	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-4	06/13/19	345.26	24.30	339.26	13.27	331.99	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UKMW-5	06/19/08	345.30	24	340.30	10.84	334.46	---	---	---	<1.00	<1.00	25.3	<1.00	<1.00	23.2	<1.00	21.9	<2.00	<1.00	ND	<19.0	<19.0	<19.0	<19.0	<19.0	ND	11.4	11.4	
UKMW-5	09/09/08	345.30	24	340.30	10.91	334.39	---	---	---	0.210	2.32	232	4.08	<1.00	336	15.4	301	11.5	5.91	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.100	ND	
UKMW-5	12/15/17	345.30	24.50	340.30	13.33	331.97	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---		
UKMW-5	04/26/18	345.30	24.45	340.30	12.34	332.96	---	120	<83.3	<0.331	<0.384	86.1	1.70	---	4.57	3.86	29.0	1.12	<0.349	ND	<0.0116	<0.00410	<0.00212	<0.0157	<0.00820	Acenaphthene 0.0321 Naphthalene 0.0415 1-Methylnaphthalene 0.0107	<0.0470	<0.0420	
UKMW-5	09/11/18	345.30	24.45	340.30	11.96	333.34	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-5	12/14/18	345.30	24.45	340.30	13.95	331.35	---	---	<0.331	<0.384	108	3.68	<0.275	5.51	3.81	33.6	---	<0.349	tert-Butylbenzene 0.488	---	---	---	---	---	---	<0.0470	<0.100		
UKMW-5	03/05/19	345.30	24.45	340.30	15.45	329.85	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	<0.0470	<0.100			
UKMW-5	06/13/19	345.30	24.45	340.30	13.22	332.08	---	---	<0.331	<0.384	109	3.30	---	7.06	5.06	43.4	2.06	<0.349	ND	---	---	---	---	---	---	---	---		

TABLE 4
SUMMARY OF HISTORICAL GROUNDWATER GAUGING AND LABORATORY ANALYTICAL DATA
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Well ID	Date	TOC Elevation (feet above MSL) ⁽¹⁾	Approximate Well Depth (feet below TOC)	Top of Screen Elevation (feet above MSL)	Depth to Groundwater (feet below TOC)	Groundwater Elevation (feet above MSL)	Gasoline	Diesel (Fuel Oil)	Heavy Oil	Benzene	Ethylbenzene	Chlorobenzene	sec-Butylbenzene	Carbon Disulfide	1,2-Dichlorobenzene	1,3-Dichlorobenzene	1,4-Dichlorobenzene*	Isopropylbenzene	n-Propylbenzene	Other VOC**	Benzo(a)pyrene	Benzo(a)anthracene	Benzo(b)fluoranthene	Fluoranthene	Phenanthrene	Other PAH	Aroclor 1242	PCB Mixtures***	
							Total Petroleum Hydrocarbons			Volatile Organic Compounds											Polynuclear Aromatic Hydrocarbons					Polychlorinated Biphenyls			
							NWTPH-Gx	NWTPH-Dx/Dx Ext., NWTPHDx-SGT or WTPH-D Modified		EPA Method 8260 / 8021B / 8240 / 601											EPA Method 8270 (SIM) / 8270C / 8270D (SIM) / 8270 Modified					EPA Method 8082, 8081 or 8080			
All results reported in micrograms per liter (µg/L).																													
Model Toxics Control Act (MTCA) Method A Cleanup Levels for Groundwater							800/1,000 ⁽²⁾	500	500	5	700	NE	NE	NE	NE	NE	NE	NE	NE	NE	Various	0.10	NE	NE	NE	NE	Various	NE	0.1
MTCA Method B Cleanup Levels (Carcinogenic/Non-carcinogenic) for Groundwater							NE	NE	NE	0.795 / 32.0	NE / 800	NE / 160	NE / 800	NE / 800	NE / 720	NE	8.10 / 560	NE	NE / 800	Various	0.012 / NE	0.12 / NE	0.12 / NE	NE / 640	NE	Various	NE	0.0438 / NE	
Washington Maximum Contaminant Levels (MCL) for Groundwater							NE	NE	NE	5	70	100	NE	NE	600	NE	75	NE	NE	Various	0.2	NE	NE	NE	NE	Various	NE	0.5	
UKMW-6	06/19/08	345.36	24	340.36	10.86	334.50	---	---	---	<1.00	<1.00	<1.00	1.59	<10.0	1.67	<1.00	<1.00	<2.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	3.66	3.66	
UKMW-6	09/09/08	345.36	24	340.36	10.93	334.43	---	---	---	<0.200	<1.00	<1.00	<1.00	<1.00	2.24	<1.00	1.45	<1.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.100	ND	
UKMW-6	03/03/15	345.36	24	340.36	---	---	<100	---	---	<0.250	<0.500	<0.500	<1.00	---	<0.500	<0.500	<1.00	<0.500	---	ND	<0.0377	<0.0377	<0.0377	<0.0377	<0.0377	ND	<0.0952	ND	
UKMW-6	12/15/17	345.36	24.35	340.36	13.37	331.99	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
UKMW-6	04/26/18	345.36	24.36	340.36	12.35	333.01	---	<66.7	<83.3	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	<0.0116	<0.00410	<0.00212	<0.0157	<0.00820	<i>Naphthalene 0.0248</i>	<0.0470	<0.0420	
UKMW-6	09/10/18	345.36	24.36	340.36	11.99	333.37	---	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100	
UKMW-6	12/14/18	345.36	24.36	340.36	13.96	331.40	---	---	---	<0.331	<0.384	<0.348	<0.365	<0.275	<0.349	<0.220	<0.274	---	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100	
UKMW-6	03/05/19	345.36	24.36	340.36	15.46	329.90	---	---	---	<0.331	<0.384	<0.348	<0.365	---	<0.349	<0.220	<0.274	<0.326	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100	
UKMW-6	06/13/19	345.36	24.36	340.36	13.23	332.13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
UKMW-7	06/19/08	345.63	24	340.63	11.15	334.48	---	---	---	<1.00	<1.00	<1.00	<1.00	<10.0	<1.00	<1.00	<1.00	<2.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.476	ND	
UKMW-7	09/09/08	345.63	24	340.63	11.20	334.43	---	---	---	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	ND	<4.76	<4.76	<4.76	<4.76	<4.76	ND	<0.100	ND	
UKMW-7	03/03/15	345.63	24	340.63	---	---	<100	---	---	<0.250	<0.500	<0.500	<1.00	---	<0.500	<0.500	<1.00	<0.500	---	ND	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	ND	<0.0957	ND	
UKMW-7	12/15/17	345.63	24.45	340.63	13.67	331.96	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UKMW-7	04/26/18	345.63	24.45	340.63	12.64	332.99	---	<66.7	<83.3	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UKMW-7	09/11/18	345.63	24.45	340.63	12.31	333.32	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UKMW-7	12/14/18	345.63	24.45	340.63	14.24	331.39	---	---	---	<0.331	<0.384	<0.348	<0.365	<0.275	<0.349	<0.220	<0.274	---	<0.349	ND	---	---	---	---	---	---	<0.0470	<0.100	
UKMW-7	03/05/19	345.63	24.45	340.63	15.74	329.89	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
UKMW-7	06/13/19	345.63	24.45	340.63	13.52	332.11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes: TOC - Top of casing.
MSL - Mean sea level.
(1) - All wells except UKMW-3 were professionally resurveyed 05/31/18. Well UKMW-3 was thought to have been destroyed until it was located beneath three to four inches of compacted material on 12/13/18.
* - The applicable cleanup level for 1,4-dichlorobenzene is the Maximum Contaminant Level (since 10⁻⁶ [Method B] < MCL < 10⁻⁵ [Method C]).
VOC - Volatile organic compounds.
** - Only VOC exceeding MTCA Method A Cleanup Level for groundwater or the Washington MCL (if established) are identified.
PAH - Polynuclear aromatic hydrocarbons.
PCB - Polychlorinated biphenyls.
*** - PCB mixtures equals cumulative total (sum) of all Aroclor constituents.
NWTPH-Gx - Northwest Total Petroleum Hydrocarbons - gasoline range.
WTPH-Dx/Dx Ext - Northwest Total Petroleum Hydrocarbons - diesel/heavy oil range.
EPA - Environmental Protection Agency
(2) - MTCA Method A Cleanup Level of 800 mg/L if benzene present in groundwater and 1,000 mg/L if no detectable benzene is present in groundwater.
NE - Not established.
--- - Not analyzed, not measured or no data available.
<5 - Not detected above laboratory specified method reporting limit (MRL) and/or method detection limit (MDL).
ND - No other constituents (VOC or PAH) were quantified at, or exceeding, laboratory specified MRL and/or MDL.
(3) - Sample collected near bottom of well using whale pump.
(4) - Sample collected near top of water column using disposable bailer.
- Constituent quantified above laboratory specified MDL.
Italics - Estimated concentration. Analyte detected between MRL and MDL.
Bold - Concentration equals or exceeds the applicable cleanup level.

TABLE 5
SUMMARY OF SOIL cPAH CALCULATIONS
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336

Soil Sample ID	Date	Benzo(a)anthracene	Benzo(e)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Aromatic total carcinogenic PAH
		Carcinogenic Polynuclear Aromatic Hydrocarbons (cPAH)							
		EPA Method 8270 (mod), 8270M-SIM, or 8270D-SIM							
		All results reported in milligrams per kilogram (mg/kg).							
Toxicity Equivalency Factors (TEF) for Minimum Required cPAH (unitless)		0.1	1	0.1	0.1	0.01	0.1	0.1	0.1
SB1@5'	05/03/02	0.695	0.800	0.742	0.770	0.927	0.235	0.603	
Reported concentration * respective TEF		0.0695	0.800	0.0742	0.0770	0.00927	0.0235	0.0603	1.11
SB1@8.5'	05/03/02	2.90	3.02	2.58	2.81	3.35	0.773	1.92	
Reported concentration * respective TEF		0.290	3.02	0.258	0.281	0.0335	0.0773	0.192	4.15
SB3@5'	05/03/02	no PAH detections - all constituents reported at <0.0100							
OS@2.5'	05/03/02	0.100	0.138	0.150	0.135	0.135	0.0481	0.132	
Reported concentration * respective TEF		0.0100	0.138	0.0150	0.0135	0.00135	0.00481	0.0132	0.196
MW5@8'	06/11/08	0.0951	0.0926	0.0995	0.0863	0.119	<0.0296	0.0695	
Reported concentration * respective TEF		0.00951	0.0926	0.00995	0.00863	0.00119	---	0.00695	0.129
MW5@10'	06/11/08	0.200	0.185	0.187	0.175	0.241	0.0439	0.127	
Reported concentration * respective TEF		0.0200	0.185	0.0187	0.0175	0.00241	0.00439	0.0127	0.261
MW6@8'	06/12/08	0.0515	0.0678	0.0651	0.0615	0.0693	<0.0154	0.0536	
Reported concentration * respective TEF		0.00515	0.0678	0.00651	0.00615	0.000693	---	0.00536	0.0917
MW6@10'	06/12/08	0.0713	0.0879	0.097	0.0879	0.0974	<0.0301	0.067	
Reported concentration * respective TEF		0.00713	0.0879	0.0097	0.00879	0.000974	---	0.0067	0.121
MW7@10'	06/11/08	no PAH detections - all constituents reported at <0.0144							
CB-1-5	06/27/19	no PAH detections - all constituents reported at <0.00716							
CB-1-6	06/28/19	0.000670	0.0193	<0.00635	<0.00635	0.0105	<0.00635	0.00141	
Reported concentration * respective TEF		0.0000670	0.0193	---	---	0.000105	---	0.000141	0.0196
CB-1-8	06/28/19	<0.00638	<0.00638	<0.00638	<0.00638	0.0138	<0.00638	<0.00638	
Reported concentration * respective TEF		---	---	---	---	0.000138	---	---	0.000138
CB-1-9.5	06/28/19	<0.00614	0.000618	<0.00614	0.00102	<0.00614	<0.00614	<0.00614	
Reported concentration * respective TEF		---	0.000618	---	0.000102	---	---	---	0.000720
CB-2-2.5	06/28/19	4.26	2.69	3.62	1.03	4.98	0.329	0.899	
Reported concentration * respective TEF		0.426	2.69	0.362	0.103	0.0498	0.0329	0.0899	3.75
CB-2-5	06/28/19	0.0384	0.0539	0.0838	0.0232	0.0501	0.00993	0.0392	
Reported concentration * respective TEF		0.00384	0.0539	0.00838	0.0023	0.000501	0.000993	0.00392	0.0739

TABLE 5
SUMMARY OF SOIL cPAH CALCULATIONS
Former U-Haul Facility No. 615081
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Soil Sample ID	Date	Benzo(a)anthracene	Benzo(e)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenzo(a,h)anthracene	Indeno(1,2,3-cd)pyrene	Arithmetic total carcinogenic PAH
		Carcinogenic Polynuclear Aromatic Hydrocarbons (cPAH)							
		EPA Method 8270 (mod), 8270M-SIM, or 8270D-SIM							
		All results reported in milligrams per kilogram (mg/kg).							
CB-2-9.5	06/28/19	no PAH detections - all constituents reported at <0.00635							
CB-3-5	06/27/19	no PAH detections - all constituents reported at <0.00699							
CB-3-8.5	06/27/19	no PAH detections - all constituents reported at <0.00623							
CB-3-9.5	06/27/19	no PAH detections - all constituents reported at <0.00638							
CB-4-5	06/27/19	no PAH detections - all constituents reported at <0.00712							
CB-4-9.5	06/27/19	no PAH detections - all constituents reported at <0.00622							
CB-5-5	06/27/19	no PAH detections - all constituents reported at <0.00716							
CB-5-6	06/28/19	no PAH detections - all constituents reported at <0.00730							
CB-5-9.5	06/28/19	no PAH detections - all constituents reported at <0.00617							
Notes:		cPAH	-Arithmetic sum of carcinogenic polynuclear aromatic hydrocarbons.						
		EPA	- Environmental Protection Agency						
		<0.0296	- Not detected above laboratory specified method detection limit (MDL) or method reporting limit (MRL).						
		---	- Not calculated based on constituent concentration not quantified.						
			- Constituent quantified above laboratory specified MDL or MRL.						
		Bold	- Concentration equals or exceeds MTCA Method A soil cleanup level for cPAH (0.1 mg/kg)						

Appendix A

ATC Standard Operating Procedures



ATC STANDARD OPERATING PROCEDURE LOW-FLOW PURGING AND GROUNDWATER SAMPLING

EQUIPMENT

Pumps: Adjustable rate, positive displacement pumps (e.g., low flow-rate submersible centrifugal or bladder pumps constructed of stainless steel or Teflon). The pump should be easily adjustable and capable of operating reliably at lower flow rates. Adjustable rate peristaltic pumps may be used with caution. Bailers are inappropriate for use in this procedure.

Tubing: Tubing used in purging and sampling each well must be dedicated to that individual well. Once properly located, moving the pump in the well should be avoided. Consequently, the same tubing should be used for purging and sampling. Teflon or Teflon-lined polyethylene tubing must be used to collect samples for organic analysis. For samples collected for inorganic analysis, Teflon or Teflon lined polyethylene, PVC, Tygon or polyethylene tubing may be used. The tubing wall thickness should be maximized ($\frac{3}{8}$ to $\frac{1}{2}$ inch) and the tubing length should be minimized (i.e. do not have excess tubing outside of the well). Pharmaceutical grade (platinum-cured polyethylene, or equivalent) tubing should be used for the section around the rotor head of the peristaltic pump to minimize gaseous diffusion.

Water level measuring device, 0.01 foot accuracy, (electronic preferred for tracking water level drawdown during all pumping operations).

Flow measurement supplies (e.g., graduated cylinder and stop watch).

Power source (e.g., generator, located downwind; car battery; nitrogen tank; etc). The generator should not be oversized for the pump.

In-line flow-through cell containing purge criteria parameter monitoring instruments for pH, specific conductance, temperature, oxidation-reduction potential (ORP) and dissolved oxygen (DO). The in-line device should be bypassed or disconnected during sample collection.

Decontamination supplies: distilled water, scrub brushes, Liquinox[®] soap and three five-gallon buckets are required for three-stage decontamination (Liquinox[®]/water wash and two distilled water rinse cycles).

Sample Bottles: It is recommended that preservatives are added to sample bottles by the laboratory prior to field activities to reduce potential error or introduction of contaminants.

Sample tags or labels, chain of custody.

Well construction data, location map, field data from last sampling event.

PROCEDURE

1. Measure and record the depth to water (to 0.01 foot) in all wells to be sampled before installing the pump or tubing. Care should be taken to minimize disturbance to the water column and to any particulate matter attached to the sides or at the bottom of the well.
2. Attach and secure the tubing to the low-flow pump. Slowly lower the pump into the well and secure the safety drop cable, tubing, and electrical lines to each other using nylon stay-ties. For peristaltic pump operation, lower only the Teflon-lined tubing into the well and attach pharmaceutical-grade polyethylene tubing to the portion to be attached to the pump rotor.
3. Pump, safety cable, tubing and electrical lines should be lowered slowly into the well to a depth corresponding to the center of the saturated screen section of the well (by default), or at a location determined to either be a preferential flow path or zone where contaminants are present. The pump intake should be kept a minimum of two feet, if possible, above the bottom of the well to prevent mobilization of any sediment present in the bottom of the well. Secure the pump and tubing to the well casing to prevent slippage of the tubing into the well during purging and sampling.
4. Measure the water level again with the pump in the well before starting the pump. Start the pump at the lowest rate possible (100 milliliters per minute [mL/min]) while measuring drawdown continuously. Avoid

CONTINUED ON NEXT PAGE

(Low-Flow Purging and Groundwater Sampling SOP – continued)

surging water from the well. Observe air bubbles displaced from discharge tube to assess progress of steady pumping until water arrives at the surface. Adjust the pumping rate such that there is little or no water level drawdown in the well (less than 0.3 foot) and the water level should stabilize. If the minimum drawdown that can be achieved exceeds 0.3 foot, but remains stable, continue purging until indicator parameters stabilize without dewatering the well screen, if possible. Water level measurements should be made continuously. Pumping rate changes (both time and rate) should be recorded on the field logs. Precautions should be taken to avoid pump suction loss or air entrainment. Pumping rates should, if needed, be reduced to the minimum capabilities of the pump to avoid pumping the well dry and ensure stabilization of indicator parameters. If the recharge rate of the well is very low, purging should be interrupted so as not to cause the drawdown within the well to advance below the pump intake but the operator should attempt to maintain a steady flow rate with the pump to the extent practicable. In these low-yielding wells, where 100 mL/min exceeds the entrance rate of groundwater into the well, it is important to avoid complete dewatering of the well screen interval. In these cases, the pump should remain in place and the water level should be allowed to recover repeatedly until three well volumes have been purged and there is sufficient volume in the well to permit collection of samples (up to four hours). Samples may then be collected even though the indicator field parameters have not stabilized.

5. While purging the well, monitoring of in-line water quality indicator parameters should include specific conductance, pH, DO, temperature and ORP, which must be collected every three to five minutes until all of the parameters have stabilized. Stabilization is achieved when three successive readings are within:
 - ± 0.1 for pH;
 - $\pm 3\%$ for conductivity and temperature;
 - ± 10 mV ORP; and,
 - $\pm 10\%$ for DO

A minimum subset of these parameters that can be used to determine stabilization during purging in this procedure is pH, specific conductivity and DO. DO is typically the last parameter to stabilize. Stabilization of indicator parameters is used to indicate that conditions are suitable for sampling to begin.

If, after one hour of purging, indicator field parameters have not stabilized, one of three optional courses of action may be taken:

- Continue purging until stabilization is achieved;
 - Discontinue purging, do not collect any samples, and record in the logbook that stabilization could not be achieved (the documentation must describe attempts to achieve stabilization); or
 - If three well volumes have been evacuated from the well and parameter stabilization has not been achieved, discontinue purging, collect samples, and provide a full explanation of attempts to achieve stabilization in the logbook.
6. Once stabilization has been documented, volatile organic compounds (VOC) and gas sensitive (e.g., Fe^{+2} , CH_4) parameter samples should be immediately collected directly into pre-preserved sample containers. All sample containers should be filled by allowing the pump discharge to flow gently down the inside of the container with minimal turbulence. Samples requiring pH adjustment should have their pH checked to assure that the proper pH has been obtained. For VOC samples, this will require that a test sample be collected to determine the amount of preservative required to be added to the sample containers prior to sampling.
 7. Filtered metal samples are to be collected with an in-line filter. A high capacity, in-line 0.45-micron particulate filter must be pre-rinsed according to the manufacturer's recommendations, or with approximately one liter of groundwater following purging and prior to sampling. After the sample is filtered it must be preserved immediately.

As each sample is collected, the sample should be labeled and placed into a cooler with proper temperature control. After collection of the samples, the tubing from the pump should be properly discarded or dedicated to the well for re-sampling by hanging the tubing inside the well. When finished, secure the well (close and lock it up).

ATC STANDARD OPERATING PROCEDURE HAND AUGER DRILLING AND SOIL SAMPLING

Soil borings are advanced utilizing a stainless steel hand-operated auger tool. The subsurface lithology will determine the type of auger bucket head used: a regular solid-body bucket is best for dry to slightly damp, light to medium density soils; a sand auger bucket is designed to retain soils comprised primarily of sand; and a mud auger bucket (windowed bucket) is best suited for wet silt and clays with high plasticity. Auger buckets are 3.25-inches in diameter, although 2.25-inch diameter and smaller, custom designs can be utilized depending on the lithology. ATC attempts to advance the hand auger by gently rotating the hand auger into the soil, allowing it to pull itself into the ground. Once the bucket is 3/4 full of cuttings, it is lifted out of the hole and emptied by shaking the bucket vertically. Using this technique, the boring is advanced to the desired sample depth. Extensions can be added to increase the length of the tool.

Sample collection is achieved by one of two methods. The soil extracted from the desired sample depth can be removed from the auger bucket head and placed directly in a laboratory supplied container appropriate for the proposed analysis. The collected sample container is appropriately sealed, marked for identification and stored in an ice chest cooled to approximately four degrees Celsius with wet ice for delivery to a State certified laboratory. Chain of custody records are maintained as samples are collected and accompany the samples to the laboratory.

The second method utilized for sample collection with hand-operated tools involves the use of a slide hammer and a two-inch diameter split core sampler (six-inches in length). The split core sampler is generally loaded with a decontaminated metal sleeve (brass or stainless steel), which is fitted with extensions to reach the bottom of the auger-advanced boring. At the surface, a hand-operated slide hammer is utilized to drive the split core sampler into the subsurface soils. After the sampler is driven, the tools are extracted from the boring and the split core sampler is disassembled to obtain the representative soil sample. The sample tube will be visually inspected to insure that the tube is completely filled with soil, and no headspace exists in samples submitted for laboratory analysis. The collected brass sample tube will be sealed at each end with Teflon[®] liner squares followed by aluminum foil liners, capped with plastic end-caps, sealed with Teflon[®] tape, marked for identification, and stored in an ice chest cooled to approximately four degrees Celsius with wet ice for delivery to a State certified laboratory. Alternatively, soil samples for volatile organic compound analysis are extracted in the field using laboratory-provided extraction kits. This sampling technique minimizes the sample exposure to the atmosphere (a potential for loss of volatile organic compounds). Chain of custody records are maintained as samples are collected and accompany the samples to the laboratory.

When utilizing hand auger for soil borings, selected cuttings are emptied into a sealable plastic bag for field soil vapor monitoring and soil classification purposes. Soil samples are logged by an ATC Field Scientist in general accordance with American Society of Testing and Materials (ASTM) Method D 2488 and boring logs maintained.

To minimize the potential for cross-contamination, a new pair of disposable gloves are worn when preparing a sample for laboratory analysis. Additionally, all downhole sampling equipment is washed in an Alconox[®] or Liquinox[®] and tap water solution, rinsed with tap water and rinsed again with distilled water prior to each sampling event. Decontamination water and soil boring cuttings are stored in separate, labeled 55-gallon drums which remain on-site pending disposal.

ATC STANDARD OPERATING PROCEDURE ROTOSONIC DRILLING AND SOIL SAMPLING

The roto sonic drill rig employs the use of high-frequency, resonant energy to rotationally advance a 6-inch inside diameter (ID) by 7-inch outside diameter (OD) core barrel within a nominal 7-inch ID by 9-inch OD overshot casing to construct an approximate 9⁵/₈-inch diameter borehole. This dual-string assembly allows advancement of the overshot casing with the inner core barrel used to collect samples. The core barrel is driven ahead of the overshot casing and is used to collect a representative continuous core sample in approximate 10-foot lengths. Once the core barrel is advanced to the required depth, the drill head (attached to the drill rig) is disconnected from the core barrel and reconnected to the overshot casing. The overshot casing is then driven down over the core barrel. The overshot casing prevents the hole from collapsing when the core barrel is extracted for sample retrieval. Attached to the tip of both the core barrel sampler and the overshot casing are hardened steel casing shoe-type bits. The drill bits have several carbide buttons around the tip and outer edge that cut through the formation as the drill string is vibrated and rotated.

Following core sample retrieval, the soil is emptied into plastic bags in approximate two-foot lengths and labeled for depth. Soil samples are logged by an ATC Field Scientist in general accordance with American Society for Testing and Materials Method D 2488 and field boring logs maintained.

Soil samples are collected by driving a laboratory-provided sample container into the core sample. The container is visually inspected to insure it is completely filled with soil, and no headspace exists in samples submitted for laboratory analysis. The sample container is sealed with a Teflon[®] lined cap, marked for identification and stored in an ice chest cooled to approximately four degrees Celsius with wet ice for delivery to a State-certified laboratory. Alternatively, soil samples for volatile organic compound analysis are extracted in the field using laboratory-provided extraction kits. Chain of custody records are maintained as samples are collected and accompany the samples to the laboratory.

To minimize the potential for chemical exposure, a new pair of disposable gloves are worn when logging. All downhole drilling and sampling equipment is washed in an Alconox[®] or Liquinox[®] and tap water solution, rinsed with tap water and rinsed again with distilled water prior to each drilling event. Excess drill cuttings are placed in 55-gallon drums or a rolloff-type container and remain on-site pending disposal. Alternatively, soil cuttings may be spread onsite depending on project-specific requirements. Borings are typically backfilled with grout (or other materials deemed acceptable by the permitting agency) if no well is installed.

STANDARD OPERATING PROCEDURE FIELD SOIL VAPOR AND METALS MONITORING

Soil Vapor

The MiniRAE 2000 (or equivalent) photoionization detector (PID) is calibrated on-site at the commencement of each work day to zero and to 100-parts per million by volume (ppmV) using isobutylene-in-air span gas (equivalent to benzene). An appropriate PID lamp is selected based on the ionization potential of the primary chemical(s) of concern relevant to the investigation.

A representative soil sample is collected from each sample location and placed in a sealable plastic bag. The soil sample identifier is marked on the bag above the top of the bag seal. The bag is sealed and the soil disaggregated. At least ten minutes is allowed for the soil to be heated by direct sunlight and for any volatile organic compounds in the soil to accumulate in the headspace of the bag. In cool weather (e.g. below 60 degrees Fahrenheit) or darkness, the soil sample bag is warmed for at least ten minutes inside a heated vehicle.

Volatile gases are then monitored by inserting the probe of the PID into the bag. The PID is equipped with a lamp which is capable of detecting volatile organic compounds at concentrations of 0.1 to 9,999 ppmV. The PID probe remains inside the bag for a period of time sufficient to allow the reading to peak and stabilize. The peak reading is recorded on the soil boring log.

Metals

Soil samples subject to x-ray fluorescence (XRF) analyzer screening are retained in the sealable plastic bag which is wiped clean of debris. The contents of the bag are packed so that the soil in the bag is a minimum of one inch thick below the XRF analyzer window. The XRF analyzer is calibrated to known standards and programmed to measure target metals concentrations in soil. The XRF analyzer window is placed over the packed soil sample and the x-ray trigger engaged for 60 seconds. After 60 seconds, the analysis is terminated and the metals constituent concentrations of interest are recorded along with the unique sample identifier in the field notes (all data are also recorded in the XRF's data logger and are available for later download).

Appendix B

Field Data (June 2019 Groundwater Sampling Event)





ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

Monitoring Well Purging and Sampling Log

FLD-103

Revision 1.0

Jul-08

ATC Branch: 10116-Monterey Park

Date: 6/13/2019

Page 1 of 1

On-Site Representative(s): L. Brown

Project: U-Haul 615081

Location: 800-812 W Columbia Drive, Kennewick, WA 99336

Contact Information:

Project No: ~~4052-5081-05~~
1052508106

1

Well ID: MW-1

Weather: Sunny

Temperature: ~97°F

Purging & Sampling Instrumentation & Method

Water Level Meter (Model/ID): Solinst 101

Interface Probe (Model/ID): NA

Water Quality Meter (Model/ID): YSI Pro Plus

Decontamination Method: Alconox and tap water rinse

Purging Equipment: PVC Bailer Bladder Pump Submersible Pump Peristaltic Pump Other: _____

Purge Method: 3 Well Volumes Low Flow Micro Purge Intake Depth (feet below TOC) 18

Sampling Method: Teflon Bailer Disposable Bailer Dedicated Tubing Other: _____

Casing Volume Information

Purging Calculations

Casing Diameter (Circle): 2" 4" 6" Other

Casing Volumes (CV):

Casing Multiplier (CM)(gallons/foot): 0.16 0.65 1.47

WC _____ x CM _____ = _____ (CV)(gal) x 3.0 CV (gal) = _____ PV

Monitoring Measurements

Depth to LNAPL (feet): NA

Top of Screen (feet bTOC)/Total Well Depth (feet): TD ≈ 24'

Depth to Water (DTW)(feet): 12.88

Water Column (WC)(feet): 11.12

LNAPL Thickness (ft): NA

Purging Start Time: 1450

Purging Data

Time (24 Hours)	DTW (Feet)	Cum. Vol. Purged (gal/liters)	Temp (°C) (± 1°)	Specific Cond. (uS/cm) (± 5%)	Turbidity NTU	Dissolved Oxygen (mg/L) (± 10%)	pH (± 0.1)	ORP (mV) (± 10 mV)	Other Visual
1502	12.88	0.25	20.3	596	3.11	7.52	5.98	2.4	Clear
1505	12.88	0.35	20.1	597	1.32	7.22	5.74	17.1	Clear
1508	12.88	0.45	19.8	594	1.25	7.15	5.43	36.2	Clear
1511	12.88	0.55	19.8	594	1.41	7.05	5.26	46.8	Clear
1514	12.88	0.65	19.5	595	1.79	9.80	6.71	-50.7	Clear
1517	12.88	0.75	19.6	594	1.21	10.11	6.96	-60.0	Clear
1520	12.88	0.85	19.1	592	0.52	10.19	6.95	-60.5	Clear
1523	12.88	0.95	19.0	593	0.72	10.21	6.94	-59.6	Clear

Sample Data

Sample ID: MW-1	Time of Sample: 1525	Filtered (yes/no)	Preservatives	Analytical Parameters
Container Types, Volumes, & Quantities:				
Various - 3x Amber 40mL WA		No	HCL various	halogenated VOC

Well Recovery Data

Maximum Drawdown (DTWm)(feet):	Approximate Flow Rate (GPM): 130 ml/min
Recovery Type: <input checked="" type="checkbox"/> Fast <input type="checkbox"/> Slow	% Recovery =

Purge Water Disposition (Attach Drum Inventory Log - FLD 108):

Comments: No odors/No sheen observed in purge, H₂O.



ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

Monitoring Well Purging and Sampling Log

FLD-103

Revision 1.0

Jul-08

ATC Branch: 10416 ~~Monterey Park~~ 10282 Seattle

Date: 6/13/2019

Page 1 of 1

On-Site Representative(s): L. Brown

Project: U-Haul 615081

Location: 800-812 W Columbia Drive, Kennewick, WA 99336

Contact Information:

Project No: 1052508105
1052508106

1

Well ID: MW- 5

Weather: Sunny

Temperature: ~96°F

Purging & Sampling Instrumentation & Method

Water Level Meter (Model/ID): Solinst 101

Interface Probe (Model/ID): NA

Water Quality Meter (Model/ID): YSI Pro Plus

Decontamination Method: Alconox and tap water rinse

Purging Equipment: PVC Bailer Bladder Pump Submersible Pump Peristaltic Pump Other: _____

Purge Method: 3 Well Volumes Low Flow Micro Purge Intake Depth (feet below TOC) 18

Sampling Method: Teflon Bailer Disposable Bailer Dedicated Tubing Other: _____

Casing Volume Information

Purging Calculations

Casing Diameter (Circle): 2" 4" 6" Other _____

Casing Volumes (CV):

Casing Multiplier (CM)(gallons/foot): 0.16 0.65 1.47

WC _____ x CM _____ = _____ (CV)(gal) x 3.0 CV (gal) = _____ PV

Monitoring Measurements

Depth to LNAPL (feet): NA

Top of Screen (feet bTOC)/Total Well Depth (feet): TD ~ 25'

Depth to Water (DTW)(feet): 13.22

Water Column (WC)(feet): 11.78

LNAPL Thickness (ft): N/A

Purging Start Time: 1542

Purging Data

Time (24 Hours)	DTW (Feet)	Cum. Vol. Purged Gal (liters)	Temp (°C) (± 1°)	Specific Cond. (uS/cm) (± 5%)	Turbidity NTU	Dissolved Oxygen (mg/L) (± 10%)	pH (± 0.1)	ORP (mV) (± 10 mV)	Other
1552	13.22	0.30	18.8	944	8.28	1.91	6.53	-84.4	Clear
1555	13.22	0.40	19.0	915	4.77	1.62	6.48	-83.3	Clear
1558	13.22	0.50	19.1	911	5.17	1.49	6.50	-84.3	Clear
1601	13.22	0.60	18.6	898	3.67	1.37	6.53	-84.5	Clear
1604	13.22	0.70	19.1	886	5.32	1.30	6.54	-82.2	Clear
1607	13.22	0.80	19.1	869	4.24	1.17	6.54	-80.4	Clear
1610	13.22	0.90	19.1	860	3.51	1.22	6.55	-79.0	Clear

Sample Data

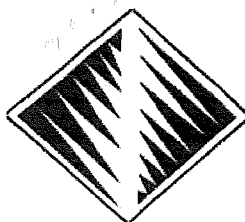
Sample ID: MW- 5	Time of Sample: 1615	Filtered (yes/no)	Preservatives	Analytical Parameters
Container Types, Volumes, & Quantities:				
Various 3x 40 mL Amber VOA		No	HCL various	halogenated VOC

Well Recovery Data

Maximum Drawdown (DTWm)(feet):	Approximate Flow Rate (GPM): 140 mL/min
Recovery Type: <input checked="" type="checkbox"/> Fast <input type="checkbox"/> Slow	% Recovery =

Purge Water Disposition (Attach Drum Inventory Log - FLD 108):

Comments: Intermittent slugs of pink/red material in purge (bio-floke?) during initial ~5 min of purge.



FIELD ENVIRONMENTAL INSTRUMENTS, INC.

www.fieldenvironmental.com

301 Brushton Avenue
Suite A
Pittsburgh PA 15221
800-393-4009 Toll Free
(412) 436-2600 Local
(412) 436-2616 Fax

YSI Pro Plus Calibration Certificate

Cal Standard	Lot #	Expiration	Pre-Cal Reading	Post-Cal Reading	Acceptable Range
PH 7 @ 25 ^C	7810596	11/30/2020	6.75	7.00	(6.86 - 7.14)
			pH mV value	-17.5	(0 mV +/- 50mV)

Cal Standard	Lot #	Expiration	Pre-Cal Reading	Post-Cal Reading	Acceptable Range
PH 4 @ 25 ^C	7801545	2/29/2020	4.14	4.00	(3.92 - 4.08)
			pH mV value	156.4	(147.5mV to 162.5mV)

Cal Standard	Lot #	Expiration	Pre-Cal Reading	Post-Cal Reading	Acceptable Range
PH 10 @ 25 ^C	7805966	5/30/2020	9.64	10.00	(9.8 - 10.20)
			pH mV value	-189.8	(-182.5mV to -197.5mV)

Cal Standard	Lot #	Expiration	Pre-Cal Reading	Post-Cal Reading	Acceptable Range
Conductivity	7805081	5/30/2020	1.435	1.409	(1.338 to 1.479)
			Cell Constant	4.8	(4.5 to 5.5)

Check Standard	Temp ©	Reading	Acceptable Range
ORP	21.0	225.0	(+/- 2.0mV)

ORP Offset (0 +/- 100)

Dissolved Oxygen	mm Hg	% Saturation	mg/L
		100.0	10.28
Barometer	mm Hg	Sensor Value	Acceptable Range
		760.0	4.6

Model **Pro Plus**
 S/N
 Barcode
 Order #

New DO Membrane
 Yes No

Black Blue Yellow

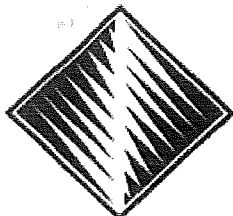
Calibrated By ▼

Date of Calibration

*Solutions provided by LabChem (412-826-5230)

All calibrations performed by FEI conform to manufacturer's specifications. Please report any issues within 24 hours of receiving equipment.

All calibration solutions used are traceable to NIST. Additional documentation is available upon request.



FIELD ENVIRONMENTAL INSTRUMENTS, INC.

www.fieldenvironmental.com

301 Brushton Ave
Suite A
Pittsburgh, PA 15221
Toll Free (800) 393-4009
Local (412) 436-2600
Fax (412) 436-2616

Turbidity Meter Calibration Certificate

	<u>Lot #</u>	<u>Exp Date</u>	<u>Reading</u>
0.0 NTU	18262551	2/1/20	0.0
10.0 NTU	18127157	9/1/19	10.0
100 NTU	na		
750 NTU	na		
1000 NTU	na		

Order #	400297
Model	2020T
S/N	67-3218
Barcode	U90812X

Calibrated By David Lampert

Date of Calibration 06/12/19

All calibrations performed by Field Environmental Instruments conform to manufacturer's specifications. Any problems must be reported to Field Environmental within 24 hours of receiving equipment.

Appendix C

Laboratory Analytical Data Report (Groundwater - June 2019)



June 25, 2019

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ATC Group Services

Sample Delivery Group: L1109543
Samples Received: 06/15/2019
Project Number:
Description: U-Haul Kennewick, WA

Report To: Larry Brown and Edwin Vandegrift
9185 S. Farmer Ave Ste 111
Tempe, AZ 85284

Entire Report Reviewed By:

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	2 Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	3 Ss
UKMW-1 L1109543-01	5	
UKMW-5 L1109543-02	7	4 Cn
TRIP BLANK L1109543-03	9	5 Sr
Qc: Quality Control Summary	11	
Volatile Organic Compounds (GC/MS) by Method 8260C	11	6 Qc
Gl: Glossary of Terms	16	
Al: Accreditations & Locations	17	7 Gl
Sc: Sample Chain of Custody	18	8 Al
		9 Sc

SAMPLE SUMMARY

UKMW-1 L1109543-01 GW

Collected by
Larry Brown
Collected date/time
06/13/19 15:25
Received date/time
06/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1300264	1	06/22/19 00:56	06/22/19 00:56	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1300701	1	06/24/19 03:29	06/24/19 03:29	JCP	Mt. Juliet, TN

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

UKMW-5 L1109543-02 GW

Collected by
Larry Brown
Collected date/time
06/13/19 16:15
Received date/time
06/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1300264	1	06/22/19 01:21	06/22/19 01:21	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1300701	1	06/24/19 03:49	06/24/19 03:49	JCP	Mt. Juliet, TN

TRIP BLANK L1109543-03 GW

Collected by
Larry Brown
Collected date/time
06/13/19 15:25
Received date/time
06/15/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1300264	1	06/22/19 00:30	06/22/19 00:30	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1300701	1	06/24/19 03:10	06/24/19 03:10	JCP	Mt. Juliet, TN



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne Richards
Project Manager

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Sample Handling and Receiving

VOC pH outside of method requirement.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1109543-02	UKMW-5	8260C



Collected date/time: 06/13/19 15:25

L1109543

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.0	50.0	1	06/24/2019 03:29	WG1300701
Acrolein	U		8.87	50.0	1	06/22/2019 00:56	WG1300264
Acrylonitrile	U	J4	1.87	10.0	1	06/22/2019 00:56	WG1300264
Benzene	U		0.331	1.00	1	06/22/2019 00:56	WG1300264
Bromobenzene	U		0.352	1.00	1	06/22/2019 00:56	WG1300264
Bromodichloromethane	U		0.380	1.00	1	06/22/2019 00:56	WG1300264
Bromoform	U		0.469	1.00	1	06/22/2019 00:56	WG1300264
Bromomethane	U		0.866	5.00	1	06/22/2019 00:56	WG1300264
n-Butylbenzene	U		0.361	1.00	1	06/24/2019 03:29	WG1300701
sec-Butylbenzene	U		0.365	1.00	1	06/22/2019 00:56	WG1300264
tert-Butylbenzene	U		0.399	1.00	1	06/22/2019 00:56	WG1300264
Carbon tetrachloride	U		0.379	1.00	1	06/22/2019 00:56	WG1300264
Chlorobenzene	U		0.348	1.00	1	06/22/2019 00:56	WG1300264
Chlorodibromomethane	U		0.327	1.00	1	06/22/2019 00:56	WG1300264
Chloroethane	U		0.453	5.00	1	06/22/2019 00:56	WG1300264
Chloroform	U		0.324	5.00	1	06/22/2019 00:56	WG1300264
Chloromethane	U		0.276	2.50	1	06/22/2019 00:56	WG1300264
2-Chlorotoluene	U		0.375	1.00	1	06/22/2019 00:56	WG1300264
4-Chlorotoluene	U		0.351	1.00	1	06/22/2019 00:56	WG1300264
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/22/2019 00:56	WG1300264
1,2-Dibromoethane	U		0.381	1.00	1	06/22/2019 00:56	WG1300264
Dibromomethane	U		0.346	1.00	1	06/22/2019 00:56	WG1300264
1,2-Dichlorobenzene	U		0.349	1.00	1	06/22/2019 00:56	WG1300264
1,3-Dichlorobenzene	U		0.220	1.00	1	06/22/2019 00:56	WG1300264
1,4-Dichlorobenzene	U		0.274	1.00	1	06/22/2019 00:56	WG1300264
Dichlorodifluoromethane	U		0.551	5.00	1	06/22/2019 00:56	WG1300264
1,1-Dichloroethane	U		0.259	1.00	1	06/22/2019 00:56	WG1300264
1,2-Dichloroethane	U		0.361	1.00	1	06/22/2019 00:56	WG1300264
1,1-Dichloroethene	U		0.398	1.00	1	06/22/2019 00:56	WG1300264
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/22/2019 00:56	WG1300264
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/22/2019 00:56	WG1300264
1,2-Dichloropropane	U		0.306	1.00	1	06/22/2019 00:56	WG1300264
1,1-Dichloropropene	U		0.352	1.00	1	06/22/2019 00:56	WG1300264
1,3-Dichloropropane	U		0.366	1.00	1	06/22/2019 00:56	WG1300264
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/22/2019 00:56	WG1300264
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/22/2019 00:56	WG1300264
2,2-Dichloropropane	U		0.321	1.00	1	06/22/2019 00:56	WG1300264
Di-isopropyl ether	U		0.320	1.00	1	06/22/2019 00:56	WG1300264
Ethylbenzene	U		0.384	1.00	1	06/22/2019 00:56	WG1300264
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/24/2019 03:29	WG1300701
Isopropylbenzene	U		0.326	1.00	1	06/22/2019 00:56	WG1300264
p-Isopropyltoluene	U		0.350	1.00	1	06/22/2019 00:56	WG1300264
2-Butanone (MEK)	U		3.93	10.0	1	06/22/2019 00:56	WG1300264
Methylene Chloride	U		1.00	5.00	1	06/22/2019 00:56	WG1300264
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/22/2019 00:56	WG1300264
Methyl tert-butyl ether	U		0.367	1.00	1	06/22/2019 00:56	WG1300264
Naphthalene	U		1.00	5.00	1	06/24/2019 03:29	WG1300701
n-Propylbenzene	U		0.349	1.00	1	06/22/2019 00:56	WG1300264
Styrene	U		0.307	1.00	1	06/22/2019 00:56	WG1300264
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/22/2019 00:56	WG1300264
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/22/2019 00:56	WG1300264
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/22/2019 00:56	WG1300264
Tetrachloroethene	U		0.372	1.00	1	06/22/2019 00:56	WG1300264
Toluene	U		0.412	1.00	1	06/22/2019 00:56	WG1300264
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2019 03:29	WG1300701
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/24/2019 03:29	WG1300701

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.319	1.00	1	06/22/2019 00:56	WG1300264
1,1,2-Trichloroethane	U		0.383	1.00	1	06/22/2019 00:56	WG1300264
Trichloroethene	U		0.398	1.00	1	06/22/2019 00:56	WG1300264
Trichlorofluoromethane	U		1.20	5.00	1	06/22/2019 00:56	WG1300264
1,2,3-Trichloropropane	U		0.807	2.50	1	06/22/2019 00:56	WG1300264
1,2,4-Trimethylbenzene	0.390	<u>BJ</u>	0.373	1.00	1	06/22/2019 00:56	WG1300264
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/22/2019 00:56	WG1300264
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/22/2019 00:56	WG1300264
Vinyl chloride	U		0.259	1.00	1	06/22/2019 00:56	WG1300264
Xylenes, Total	U		1.06	3.00	1	06/22/2019 00:56	WG1300264
(S) Toluene-d8	101			80.0-120		06/22/2019 00:56	WG1300264
(S) Toluene-d8	95.8			80.0-120		06/24/2019 03:29	WG1300701
(S) 4-Bromofluorobenzene	101			77.0-126		06/22/2019 00:56	WG1300264
(S) 4-Bromofluorobenzene	89.1			77.0-126		06/24/2019 03:29	WG1300701
(S) 1,2-Dichloroethane-d4	117			70.0-130		06/22/2019 00:56	WG1300264
(S) 1,2-Dichloroethane-d4	105			70.0-130		06/24/2019 03:29	WG1300701

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		10.0	50.0	1	06/24/2019 03:49	WG1300701
Acrolein	U		8.87	50.0	1	06/22/2019 01:21	WG1300264
Acrylonitrile	U	J4	1.87	10.0	1	06/22/2019 01:21	WG1300264
Benzene	U		0.331	1.00	1	06/22/2019 01:21	WG1300264
Bromobenzene	U		0.352	1.00	1	06/22/2019 01:21	WG1300264
Bromodichloromethane	U		0.380	1.00	1	06/22/2019 01:21	WG1300264
Bromoform	U		0.469	1.00	1	06/22/2019 01:21	WG1300264
Bromomethane	U		0.866	5.00	1	06/22/2019 01:21	WG1300264
n-Butylbenzene	U		0.361	1.00	1	06/24/2019 03:49	WG1300701
sec-Butylbenzene	3.30		0.365	1.00	1	06/22/2019 01:21	WG1300264
tert-Butylbenzene	0.428	J	0.399	1.00	1	06/22/2019 01:21	WG1300264
Carbon tetrachloride	U		0.379	1.00	1	06/22/2019 01:21	WG1300264
Chlorobenzene	109		0.348	1.00	1	06/22/2019 01:21	WG1300264
Chlorodibromomethane	U		0.327	1.00	1	06/22/2019 01:21	WG1300264
Chloroethane	U		0.453	5.00	1	06/22/2019 01:21	WG1300264
Chloroform	U		0.324	5.00	1	06/22/2019 01:21	WG1300264
Chloromethane	U		0.276	2.50	1	06/22/2019 01:21	WG1300264
2-Chlorotoluene	U		0.375	1.00	1	06/22/2019 01:21	WG1300264
4-Chlorotoluene	U		0.351	1.00	1	06/22/2019 01:21	WG1300264
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/22/2019 01:21	WG1300264
1,2-Dibromoethane	U		0.381	1.00	1	06/22/2019 01:21	WG1300264
Dibromomethane	U		0.346	1.00	1	06/22/2019 01:21	WG1300264
1,2-Dichlorobenzene	7.06		0.349	1.00	1	06/22/2019 01:21	WG1300264
1,3-Dichlorobenzene	5.06		0.220	1.00	1	06/22/2019 01:21	WG1300264
1,4-Dichlorobenzene	43.4		0.274	1.00	1	06/22/2019 01:21	WG1300264
Dichlorodifluoromethane	U		0.551	5.00	1	06/22/2019 01:21	WG1300264
1,1-Dichloroethane	U		0.259	1.00	1	06/22/2019 01:21	WG1300264
1,2-Dichloroethane	U		0.361	1.00	1	06/22/2019 01:21	WG1300264
1,1-Dichloroethene	U		0.398	1.00	1	06/22/2019 01:21	WG1300264
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/22/2019 01:21	WG1300264
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/22/2019 01:21	WG1300264
1,2-Dichloropropane	U		0.306	1.00	1	06/22/2019 01:21	WG1300264
1,1-Dichloropropene	U		0.352	1.00	1	06/22/2019 01:21	WG1300264
1,3-Dichloropropane	U		0.366	1.00	1	06/22/2019 01:21	WG1300264
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/22/2019 01:21	WG1300264
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/22/2019 01:21	WG1300264
2,2-Dichloropropane	U		0.321	1.00	1	06/22/2019 01:21	WG1300264
Di-isopropyl ether	U		0.320	1.00	1	06/22/2019 01:21	WG1300264
Ethylbenzene	U		0.384	1.00	1	06/22/2019 01:21	WG1300264
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/24/2019 03:49	WG1300701
Isopropylbenzene	2.06		0.326	1.00	1	06/22/2019 01:21	WG1300264
p-Isopropyltoluene	U		0.350	1.00	1	06/22/2019 01:21	WG1300264
2-Butanone (MEK)	U		3.93	10.0	1	06/22/2019 01:21	WG1300264
Methylene Chloride	U		1.00	5.00	1	06/22/2019 01:21	WG1300264
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/22/2019 01:21	WG1300264
Methyl tert-butyl ether	U		0.367	1.00	1	06/22/2019 01:21	WG1300264
Naphthalene	U		1.00	5.00	1	06/24/2019 03:49	WG1300701
n-Propylbenzene	U		0.349	1.00	1	06/22/2019 01:21	WG1300264
Styrene	U		0.307	1.00	1	06/22/2019 01:21	WG1300264
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/22/2019 01:21	WG1300264
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/22/2019 01:21	WG1300264
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/22/2019 01:21	WG1300264
Tetrachloroethene	U		0.372	1.00	1	06/22/2019 01:21	WG1300264
Toluene	U		0.412	1.00	1	06/22/2019 01:21	WG1300264
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2019 03:49	WG1300701
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/24/2019 03:49	WG1300701

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.319	1.00	1	06/22/2019 01:21	WG1300264
1,1,2-Trichloroethane	U		0.383	1.00	1	06/22/2019 01:21	WG1300264
Trichloroethene	U		0.398	1.00	1	06/22/2019 01:21	WG1300264
Trichlorofluoromethane	U		1.20	5.00	1	06/22/2019 01:21	WG1300264
1,2,3-Trichloropropane	U		0.807	2.50	1	06/22/2019 01:21	WG1300264
1,2,4-Trimethylbenzene	U		0.373	1.00	1	06/22/2019 01:21	WG1300264
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/22/2019 01:21	WG1300264
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/22/2019 01:21	WG1300264
Vinyl chloride	U		0.259	1.00	1	06/22/2019 01:21	WG1300264
Xylenes, Total	U		1.06	3.00	1	06/22/2019 01:21	WG1300264
(S) Toluene-d8	99.1			80.0-120		06/22/2019 01:21	WG1300264
(S) Toluene-d8	88.6			80.0-120		06/24/2019 03:49	WG1300701
(S) 4-Bromofluorobenzene	103			77.0-126		06/22/2019 01:21	WG1300264
(S) 4-Bromofluorobenzene	90.4			77.0-126		06/24/2019 03:49	WG1300701
(S) 1,2-Dichloroethane-d4	112			70.0-130		06/22/2019 01:21	WG1300264
(S) 1,2-Dichloroethane-d4	101			70.0-130		06/24/2019 03:49	WG1300701

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		10.0	50.0	1	06/24/2019 03:10	WG1300701
Acrolein	U		8.87	50.0	1	06/22/2019 00:30	WG1300264
Acrylonitrile	U	J4	1.87	10.0	1	06/22/2019 00:30	WG1300264
Benzene	U		0.331	1.00	1	06/22/2019 00:30	WG1300264
Bromobenzene	U		0.352	1.00	1	06/22/2019 00:30	WG1300264
Bromodichloromethane	U		0.380	1.00	1	06/22/2019 00:30	WG1300264
Bromoform	U		0.469	1.00	1	06/22/2019 00:30	WG1300264
Bromomethane	U		0.866	5.00	1	06/22/2019 00:30	WG1300264
n-Butylbenzene	U		0.361	1.00	1	06/24/2019 03:10	WG1300701
sec-Butylbenzene	U		0.365	1.00	1	06/22/2019 00:30	WG1300264
tert-Butylbenzene	U		0.399	1.00	1	06/22/2019 00:30	WG1300264
Carbon tetrachloride	U		0.379	1.00	1	06/22/2019 00:30	WG1300264
Chlorobenzene	U		0.348	1.00	1	06/22/2019 00:30	WG1300264
Chlorodibromomethane	U		0.327	1.00	1	06/22/2019 00:30	WG1300264
Chloroethane	U		0.453	5.00	1	06/22/2019 00:30	WG1300264
Chloroform	U		0.324	5.00	1	06/22/2019 00:30	WG1300264
Chloromethane	U		0.276	2.50	1	06/22/2019 00:30	WG1300264
2-Chlorotoluene	U		0.375	1.00	1	06/22/2019 00:30	WG1300264
4-Chlorotoluene	U		0.351	1.00	1	06/22/2019 00:30	WG1300264
1,2-Dibromo-3-Chloropropane	U		1.33	5.00	1	06/22/2019 00:30	WG1300264
1,2-Dibromoethane	U		0.381	1.00	1	06/22/2019 00:30	WG1300264
Dibromomethane	U		0.346	1.00	1	06/22/2019 00:30	WG1300264
1,2-Dichlorobenzene	U		0.349	1.00	1	06/22/2019 00:30	WG1300264
1,3-Dichlorobenzene	U		0.220	1.00	1	06/22/2019 00:30	WG1300264
1,4-Dichlorobenzene	U		0.274	1.00	1	06/22/2019 00:30	WG1300264
Dichlorodifluoromethane	U		0.551	5.00	1	06/22/2019 00:30	WG1300264
1,1-Dichloroethane	U		0.259	1.00	1	06/22/2019 00:30	WG1300264
1,2-Dichloroethane	U		0.361	1.00	1	06/22/2019 00:30	WG1300264
1,1-Dichloroethene	U		0.398	1.00	1	06/22/2019 00:30	WG1300264
cis-1,2-Dichloroethene	U		0.260	1.00	1	06/22/2019 00:30	WG1300264
trans-1,2-Dichloroethene	U		0.396	1.00	1	06/22/2019 00:30	WG1300264
1,2-Dichloropropane	U		0.306	1.00	1	06/22/2019 00:30	WG1300264
1,1-Dichloropropene	U		0.352	1.00	1	06/22/2019 00:30	WG1300264
1,3-Dichloropropane	U		0.366	1.00	1	06/22/2019 00:30	WG1300264
cis-1,3-Dichloropropene	U		0.418	1.00	1	06/22/2019 00:30	WG1300264
trans-1,3-Dichloropropene	U		0.419	1.00	1	06/22/2019 00:30	WG1300264
2,2-Dichloropropane	U		0.321	1.00	1	06/22/2019 00:30	WG1300264
Di-isopropyl ether	U		0.320	1.00	1	06/22/2019 00:30	WG1300264
Ethylbenzene	U		0.384	1.00	1	06/22/2019 00:30	WG1300264
Hexachloro-1,3-butadiene	U		0.256	1.00	1	06/24/2019 03:10	WG1300701
Isopropylbenzene	U		0.326	1.00	1	06/22/2019 00:30	WG1300264
p-Isopropyltoluene	U		0.350	1.00	1	06/22/2019 00:30	WG1300264
2-Butanone (MEK)	U		3.93	10.0	1	06/22/2019 00:30	WG1300264
Methylene Chloride	U		1.00	5.00	1	06/22/2019 00:30	WG1300264
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0	1	06/22/2019 00:30	WG1300264
Methyl tert-butyl ether	U		0.367	1.00	1	06/22/2019 00:30	WG1300264
Naphthalene	U		1.00	5.00	1	06/24/2019 03:10	WG1300701
n-Propylbenzene	U		0.349	1.00	1	06/22/2019 00:30	WG1300264
Styrene	U		0.307	1.00	1	06/22/2019 00:30	WG1300264
1,1,1,2-Tetrachloroethane	U		0.385	1.00	1	06/22/2019 00:30	WG1300264
1,1,2,2-Tetrachloroethane	U		0.130	1.00	1	06/22/2019 00:30	WG1300264
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00	1	06/22/2019 00:30	WG1300264
Tetrachloroethene	U		0.372	1.00	1	06/22/2019 00:30	WG1300264
Toluene	U		0.412	1.00	1	06/22/2019 00:30	WG1300264
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2019 03:10	WG1300701
1,2,4-Trichlorobenzene	U		0.355	1.00	1	06/24/2019 03:10	WG1300701

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 06/13/19 15:25

L1109543

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,1,1-Trichloroethane	U		0.319	1.00	1	06/22/2019 00:30	WG1300264
1,1,2-Trichloroethane	U		0.383	1.00	1	06/22/2019 00:30	WG1300264
Trichloroethene	U		0.398	1.00	1	06/22/2019 00:30	WG1300264
Trichlorofluoromethane	U		1.20	5.00	1	06/22/2019 00:30	WG1300264
1,2,3-Trichloropropane	U		0.807	2.50	1	06/22/2019 00:30	WG1300264
1,2,4-Trimethylbenzene	0.489	<u>BJ</u>	0.373	1.00	1	06/22/2019 00:30	WG1300264
1,2,3-Trimethylbenzene	U		0.321	1.00	1	06/22/2019 00:30	WG1300264
1,3,5-Trimethylbenzene	U		0.387	1.00	1	06/22/2019 00:30	WG1300264
Vinyl chloride	U		0.259	1.00	1	06/22/2019 00:30	WG1300264
Xylenes, Total	U		1.06	3.00	1	06/22/2019 00:30	WG1300264
(S) Toluene-d8	100			80.0-120		06/22/2019 00:30	WG1300264
(S) Toluene-d8	98.0			80.0-120		06/24/2019 03:10	WG1300701
(S) 4-Bromofluorobenzene	101			77.0-126		06/22/2019 00:30	WG1300264
(S) 4-Bromofluorobenzene	94.2			77.0-126		06/24/2019 03:10	WG1300701
(S) 1,2-Dichloroethane-d4	115			70.0-130		06/22/2019 00:30	WG1300264
(S) 1,2-Dichloroethane-d4	109			70.0-130		06/24/2019 03:10	WG1300701

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Method Blank (MB)

(MB) R3423806-3 06/22/19 00:02

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acrolein	U		8.87	50.0
Acrylonitrile	U		1.87	10.0
Benzene	U		0.331	1.00
Bromobenzene	U		0.352	1.00
Bromodichloromethane	U		0.380	1.00
Bromoform	U		0.469	1.00
Bromomethane	U		0.866	5.00
sec-Butylbenzene	U		0.365	1.00
tert-Butylbenzene	U		0.399	1.00
Carbon tetrachloride	U		0.379	1.00
Chlorobenzene	U		0.348	1.00
Chlorodibromomethane	U		0.327	1.00
Chloroethane	U		0.453	5.00
Chloroform	U		0.324	5.00
Chloromethane	U		0.276	2.50
2-Chlorotoluene	U		0.375	1.00
4-Chlorotoluene	U		0.351	1.00
1,2-Dibromo-3-Chloropropane	U		1.33	5.00
1,2-Dibromoethane	U		0.381	1.00
Dibromomethane	U		0.346	1.00
1,2-Dichlorobenzene	U		0.349	1.00
1,3-Dichlorobenzene	U		0.220	1.00
1,4-Dichlorobenzene	U		0.274	1.00
Dichlorodifluoromethane	U		0.551	5.00
1,1-Dichloroethane	U		0.259	1.00
1,2-Dichloroethane	U		0.361	1.00
1,1-Dichloroethene	U		0.398	1.00
cis-1,2-Dichloroethene	U		0.260	1.00
trans-1,2-Dichloroethene	U		0.396	1.00
1,2-Dichloropropane	U		0.306	1.00
1,1-Dichloropropene	U		0.352	1.00
1,3-Dichloropropane	U		0.366	1.00
cis-1,3-Dichloropropene	U		0.418	1.00
trans-1,3-Dichloropropene	U		0.419	1.00
2,2-Dichloropropane	U		0.321	1.00
Di-isopropyl ether	U		0.320	1.00
Ethylbenzene	U		0.384	1.00
Isopropylbenzene	U		0.326	1.00
p-Isopropyltoluene	U		0.350	1.00
2-Butanone (MEK)	U		3.93	10.0

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3423806-3 06/22/19 00:02

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methylene Chloride	U		1.00	5.00
4-Methyl-2-pentanone (MIBK)	U		2.14	10.0
Methyl tert-butyl ether	U		0.367	1.00
n-Propylbenzene	U		0.349	1.00
Styrene	U		0.307	1.00
1,1,1,2-Tetrachloroethane	U		0.385	1.00
1,1,2,2-Tetrachloroethane	U		0.130	1.00
Tetrachloroethene	U		0.372	1.00
Toluene	U		0.412	1.00
1,1,2-Trichlorotrifluoroethane	U		0.303	1.00
1,1,1-Trichloroethane	U		0.319	1.00
1,1,2-Trichloroethane	U		0.383	1.00
Trichloroethene	U		0.398	1.00
Trichlorofluoromethane	U		1.20	5.00
1,2,3-Trichloropropane	U		0.807	2.50
1,2,3-Trimethylbenzene	U		0.321	1.00
1,2,4-Trimethylbenzene	0.548	<u>J</u>	0.373	1.00
1,3,5-Trimethylbenzene	U		0.387	1.00
Vinyl chloride	U		0.259	1.00
Xylenes, Total	U		1.06	3.00
(S) Toluene-d8	100			80.0-120
(S) 4-Bromofluorobenzene	102			77.0-126
(S) 1,2-Dichloroethane-d4	112			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3423806-1 06/21/19 22:45 • (LCSD) R3423806-2 06/21/19 23:10

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Acrolein	125	104	105	83.2	83.7	10.0-160			0.635	26
Acrylonitrile	125	200	200	160	160	55.0-149	<u>J4</u>	<u>J4</u>	0.233	20
Benzene	25.0	24.2	23.9	97.0	95.4	70.0-123			1.56	20
Bromobenzene	25.0	23.1	23.1	92.3	92.5	73.0-121			0.263	20
Bromodichloromethane	25.0	24.9	24.7	99.7	98.7	75.0-120			1.04	20
Bromoform	25.0	29.1	30.6	116	122	68.0-132			4.85	20
Bromomethane	25.0	25.4	25.4	102	101	10.0-160			0.326	25
sec-Butylbenzene	25.0	22.3	22.1	89.4	88.3	75.0-125			1.19	20
tert-Butylbenzene	25.0	23.4	23.3	93.7	93.2	76.0-124			0.519	20
Carbon tetrachloride	25.0	28.3	28.2	113	113	68.0-126			0.251	20



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3423806-1 06/21/19 22:45 • (LCSD) R3423806-2 06/21/19 23:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chlorobenzene	25.0	25.8	26.1	103	105	80.0-121			1.19	20
Chlorodibromomethane	25.0	27.5	27.8	110	111	77.0-125			1.20	20
Chloroethane	25.0	25.8	25.6	103	103	47.0-150			0.452	20
Chloroform	25.0	25.5	25.6	102	102	73.0-120			0.376	20
Chloromethane	25.0	25.9	25.4	104	102	41.0-142			1.98	20
2-Chlorotoluene	25.0	22.8	22.6	91.2	90.5	76.0-123			0.825	20
4-Chlorotoluene	25.0	22.5	22.8	89.9	91.0	75.0-122			1.28	20
1,2-Dibromo-3-Chloropropane	25.0	22.0	22.2	88.0	88.8	58.0-134			0.878	20
1,2-Dibromoethane	25.0	29.0	28.8	116	115	80.0-122			0.658	20
Dibromomethane	25.0	27.2	27.3	109	109	80.0-120			0.455	20
1,2-Dichlorobenzene	25.0	21.8	21.5	87.3	86.0	79.0-121			1.48	20
1,3-Dichlorobenzene	25.0	23.2	23.3	92.9	93.2	79.0-120			0.325	20
1,4-Dichlorobenzene	25.0	22.3	23.0	89.3	92.1	79.0-120			3.07	20
Dichlorodifluoromethane	25.0	24.3	25.2	97.1	101	51.0-149			3.82	20
1,1-Dichloroethane	25.0	24.8	25.0	99.4	99.8	70.0-126			0.437	20
1,2-Dichloroethane	25.0	25.8	25.8	103	103	70.0-128			0.134	20
1,1-Dichloroethene	25.0	26.1	25.6	104	102	71.0-124			1.89	20
cis-1,2-Dichloroethene	25.0	25.7	25.7	103	103	73.0-120			0.159	20
trans-1,2-Dichloroethene	25.0	25.1	25.1	101	100	73.0-120			0.334	20
1,2-Dichloropropane	25.0	25.7	25.9	103	104	77.0-125			0.865	20
1,1-Dichloropropene	25.0	23.9	23.8	95.7	95.4	74.0-126			0.292	20
1,3-Dichloropropane	25.0	26.7	27.3	107	109	80.0-120			2.12	20
cis-1,3-Dichloropropene	25.0	25.7	25.6	103	102	80.0-123			0.447	20
trans-1,3-Dichloropropene	25.0	26.3	26.9	105	108	78.0-124			2.48	20
2,2-Dichloropropane	25.0	21.0	20.5	83.9	82.0	58.0-130			2.28	20
Di-isopropyl ether	25.0	26.7	26.4	107	106	58.0-138			1.04	20
Ethylbenzene	25.0	24.6	24.7	98.6	98.9	79.0-123			0.312	20
Isopropylbenzene	25.0	24.8	25.0	99.2	99.9	76.0-127			0.732	20
p-Isopropyltoluene	25.0	22.8	22.6	91.2	90.5	76.0-125			0.765	20
2-Butanone (MEK)	125	193	196	154	157	44.0-160			1.52	20
Methylene Chloride	25.0	26.4	26.7	105	107	67.0-120			1.29	20
4-Methyl-2-pentanone (MIBK)	125	157	159	126	127	68.0-142			1.10	20
Methyl tert-butyl ether	25.0	26.3	25.8	105	103	68.0-125			2.00	20
n-Propylbenzene	25.0	22.2	21.9	88.6	87.6	77.0-124			1.11	20
Styrene	25.0	26.8	27.4	107	109	73.0-130			1.94	20
1,1,1,2-Tetrachloroethane	25.0	26.7	26.8	107	107	75.0-125			0.464	20
1,1,2,2-Tetrachloroethane	25.0	24.8	25.1	99.1	100	65.0-130			1.15	20
Tetrachloroethene	25.0	24.6	25.0	98.5	100	72.0-132			1.45	20
Toluene	25.0	23.5	23.2	93.9	92.9	79.0-120			1.10	20
1,1,2-Trichlorotrifluoroethane	25.0	25.5	25.7	102	103	69.0-132			0.996	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3423806-1 06/21/19 22:45 • (LCSD) R3423806-2 06/21/19 23:10

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
1,1,1-Trichloroethane	25.0	25.8	25.5	103	102	73.0-124			0.968	20
1,1,2-Trichloroethane	25.0	27.1	27.7	109	111	80.0-120			2.18	20
Trichloroethene	25.0	26.2	26.0	105	104	78.0-124			0.721	20
Trichlorofluoromethane	25.0	23.9	23.9	95.6	95.6	59.0-147			0.0883	20
1,2,3-Trichloropropane	25.0	26.3	26.7	105	107	73.0-130			1.59	20
1,2,3-Trimethylbenzene	25.0	20.1	19.9	80.5	79.5	77.0-120			1.17	20
1,2,4-Trimethylbenzene	25.0	23.9	23.3	95.5	93.3	76.0-121			2.33	20
1,3,5-Trimethylbenzene	25.0	22.7	22.3	90.8	89.2	76.0-122			1.76	20
Vinyl chloride	25.0	24.3	23.9	97.4	95.4	67.0-131			2.05	20
Xylenes, Total	75.0	74.3	74.8	99.1	99.7	79.0-123			0.671	20
<i>(S) Toluene-d8</i>				100	102	80.0-120				
<i>(S) 4-Bromofluorobenzene</i>				105	106	77.0-126				
<i>(S) 1,2-Dichloroethane-d4</i>				115	116	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Method Blank (MB)

(MB) R3424172-3 06/23/19 19:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		10.0	50.0
n-Butylbenzene	U		0.361	1.00
Hexachloro-1,3-butadiene	U		0.256	1.00
Naphthalene	U		1.00	5.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.355	1.00
(S) Toluene-d8	98.9			80.0-120
(S) 4-Bromofluorobenzene	94.2			77.0-126
(S) 1,2-Dichloroethane-d4	102			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

Laboratory Control Sample (LCS)

(LCS) R3424172-1 06/23/19 18:35

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	125	116	92.9	19.0-160	
n-Butylbenzene	25.0	30.4	122	73.0-125	
Hexachloro-1,3-butadiene	25.0	25.3	101	54.0-138	
Naphthalene	25.0	25.4	102	54.0-135	
1,2,3-Trichlorobenzene	25.0	23.0	92.0	50.0-138	
1,2,4-Trichlorobenzene	25.0	23.9	95.5	57.0-137	
(S) Toluene-d8			92.1	80.0-120	
(S) 4-Bromofluorobenzene			88.0	77.0-126	
(S) 1,2-Dichloroethane-d4			120	70.0-130	

7 Gl

8 Al

9 Sc



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.



Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

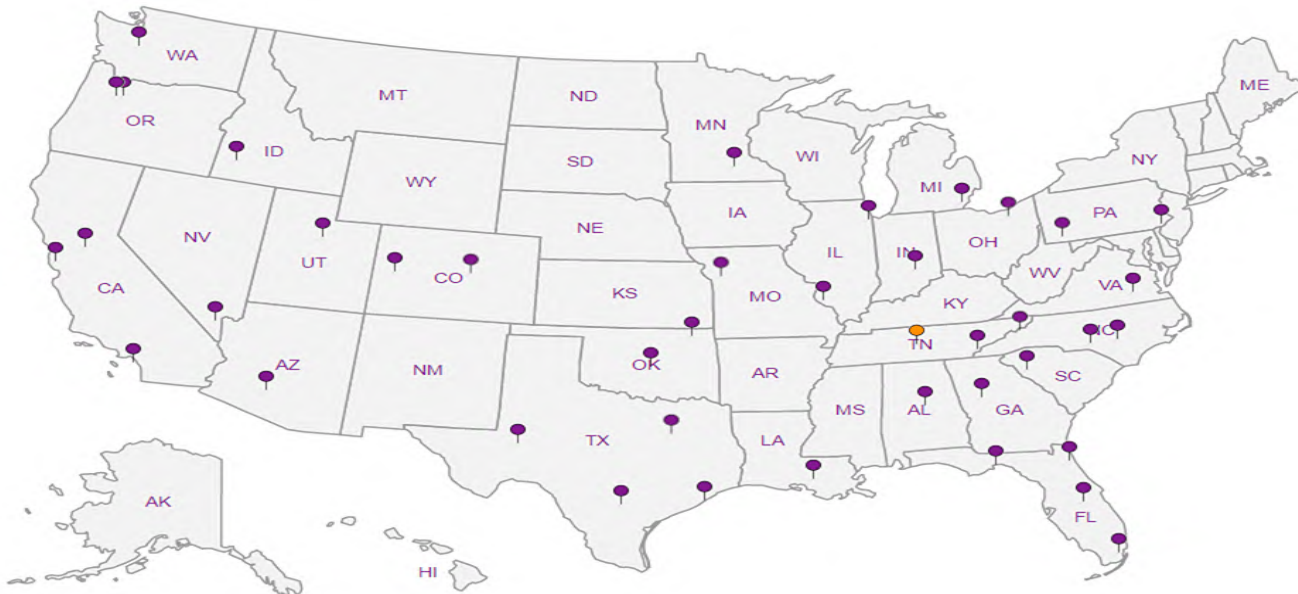
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

ATC Group Services

9185 S. Farmer Ave Ste 111
Tempe, AZ 85284

Billing Information:
Accounts Payable
9185 S. Farmer Ave Ste 111
Tempe, AZ 85284

Pres
Chk

Analysis / Container / Preservative

Chain of Custody Page 1 of 1



12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859



Report to:
Larry Brown and Edwin Vandegrift

Email To:
laurence.brown@atcassociates.com;edwin.vandeg

Project
Description: U-Haul Kennewick, WA

City/State
Collected: Kennewick/WA

Phone: 480-894-2056
Fax:

Client Project #

Lab Project #
ATCTAZ-041118S

Collected by (print):
Larry Brown

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Immediately
Packed on Ice N ___ Y

No
of
Cntrs

V8260 40mIAmb-HCl

V8260 40mIAmb-HCl-BLK

L# 1109543
Tab B200
Acctnum: ATCTAZ
Template: T151428
Prelogin: P714132
TSR: 288 - Daphne Richards
PB:
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No of Cntrs	Analysis	Container	Preservative	Remarks	Sample # (lab only)
UKMW-1		GW		6/13/19	1525	3	X				01
UKMW-5		GW		6/13/19	1615	3	X				02
		GW				3	X				
		GW				3	X				
TRIP BLANK		GW				1		X			03

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:
___ UPS ___ FedEx ___ Courier

Tracking # 4842 4632 1750

pH ___ Temp ___
Flow ___ Other ___

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
IF Applicable
VOA Zero Headspace: Y N
Preservative Checked: Y N
RAD SCREEN: <0.5 mIVhr

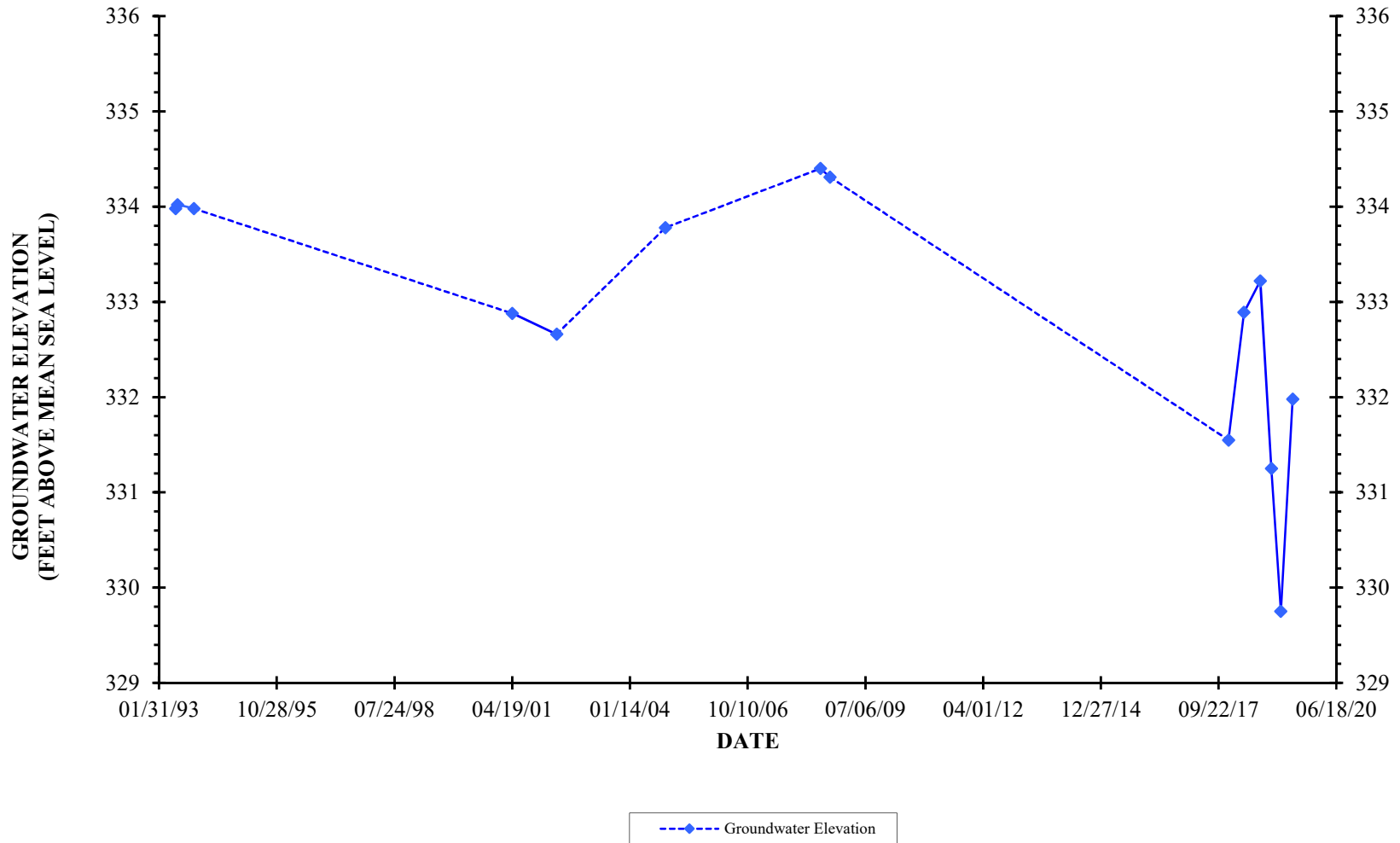
Relinquished by: (Signature) <i>[Signature]</i>	Date: 6/14/2019	Time: 1223	Received by: (Signature) <i>[Signature]</i>	Trip Blank Received: Yes/No 1 <input checked="" type="checkbox"/> No <input type="checkbox"/>	HCl/MeOH TBR
Relinquished by: (Signature) <i>[Signature]</i>	Date: 6-14	Time: 1200	Received by: (Signature) <i>[Signature]</i>	Temp: °C 31.0 ± 0.132	Bottles Received: 6
Relinquished by: (Signature) <i>[Signature]</i>	Date: 6-15-19	Time: 06:45	Received for lab by: (Signature) <i>[Signature]</i>	Date: 6-15-19	Time: 06:45
				Hold:	Condition: NCF / <input checked="" type="checkbox"/> OK

Appendix D

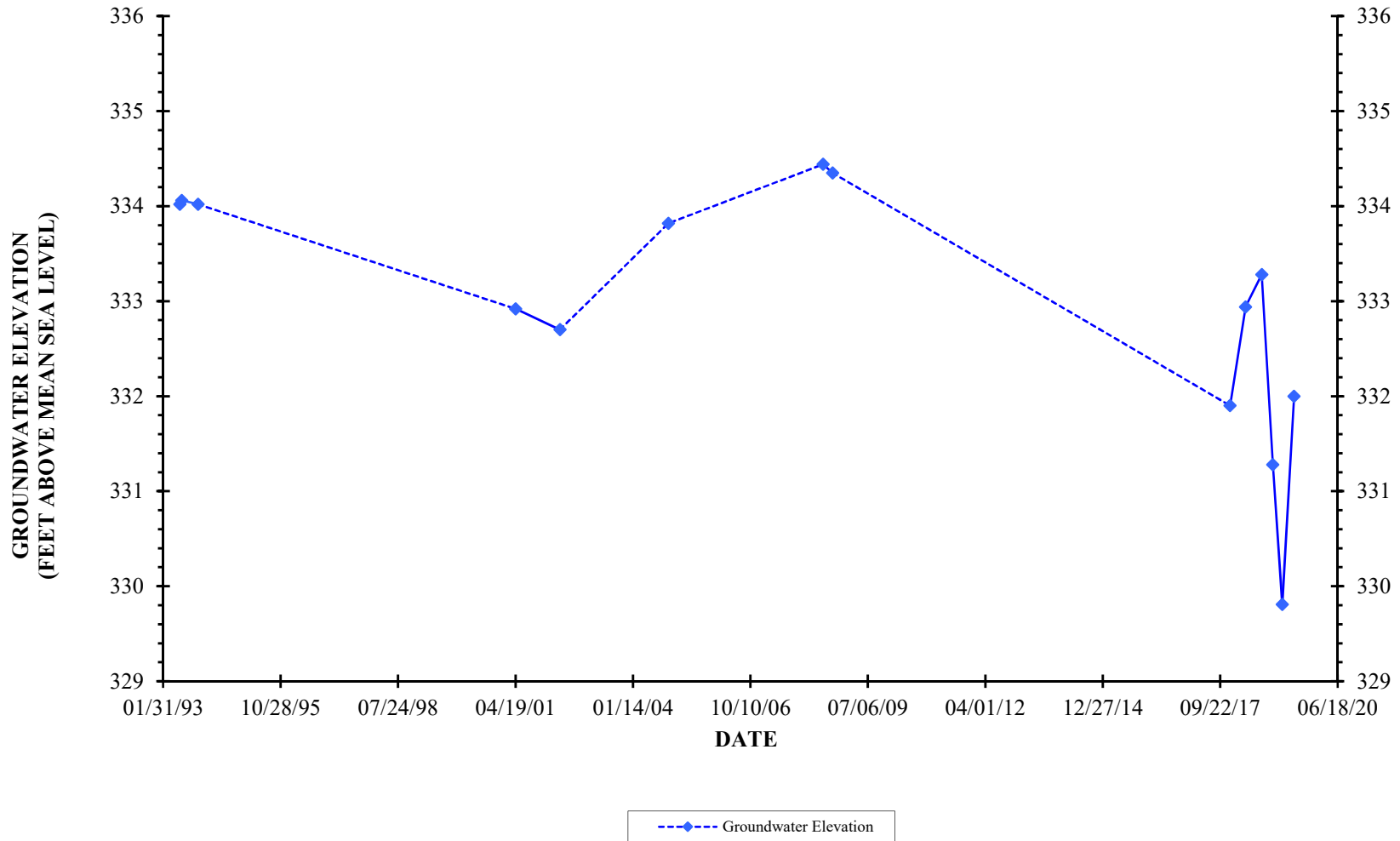
Groundwater Elevation, Depth to Groundwater and COC Attenuation Graphs



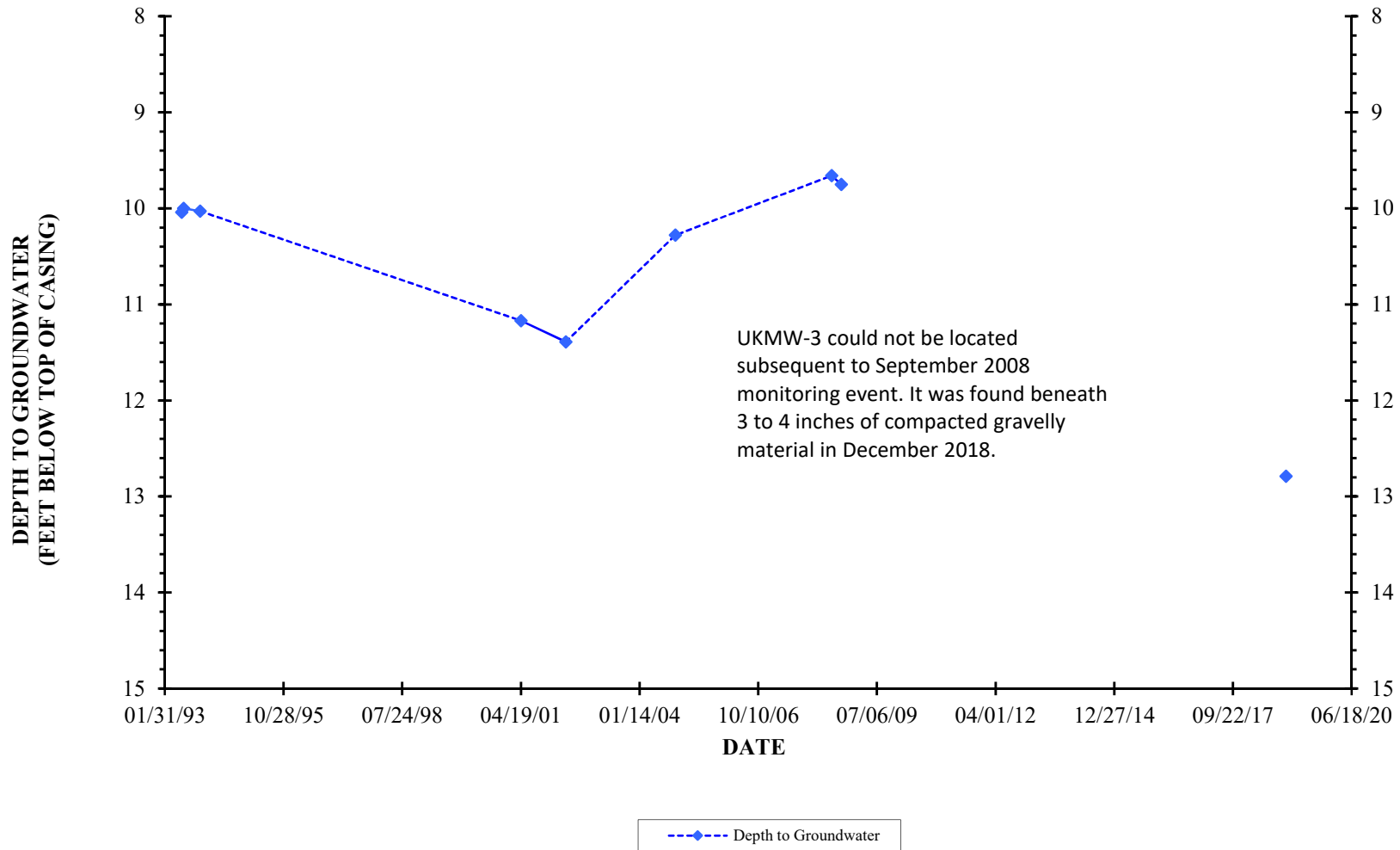
**GROUNDWATER ELEVATION
UKMW-1
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336**



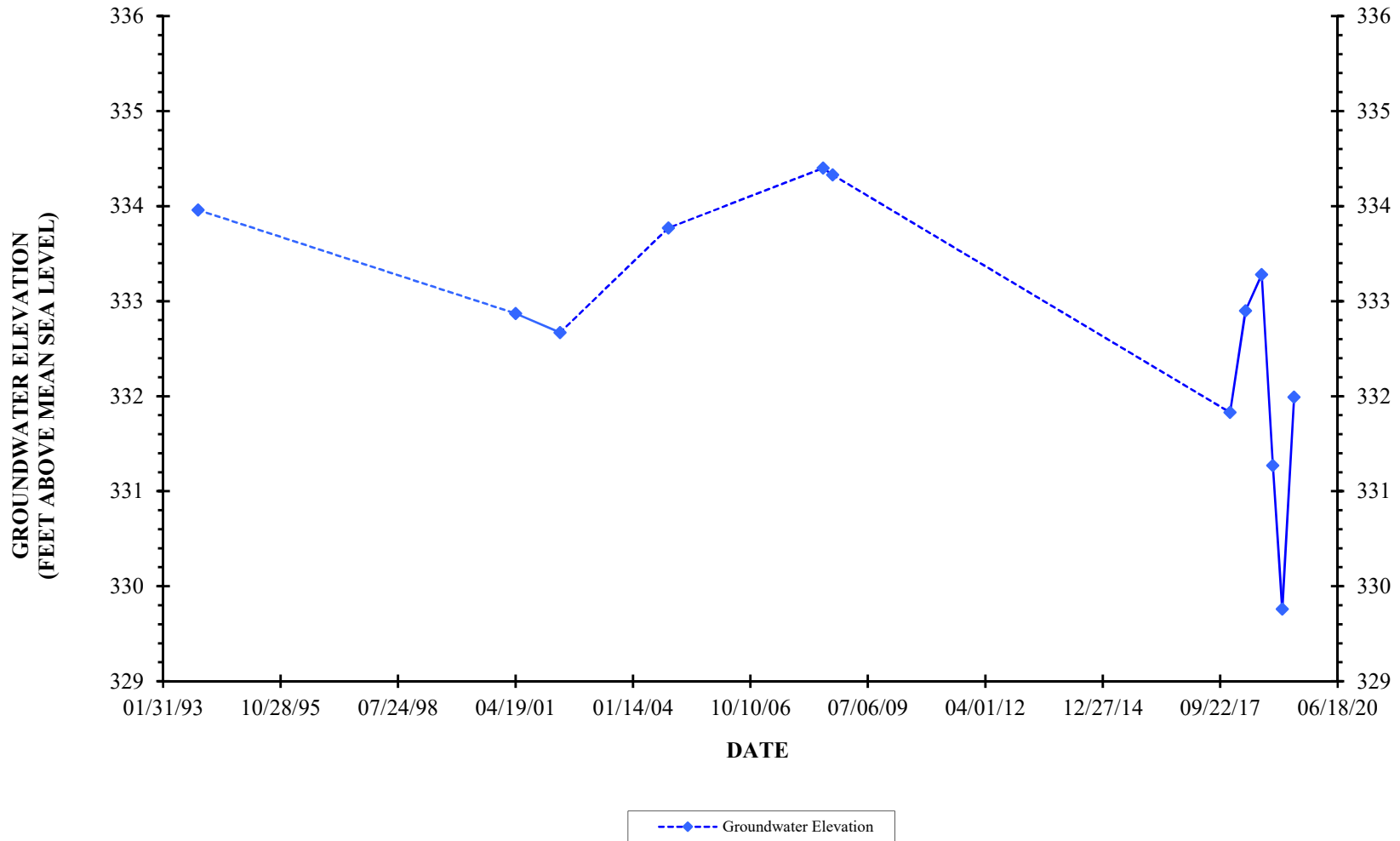
**GROUNDWATER ELEVATION
UKMW-2
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336**



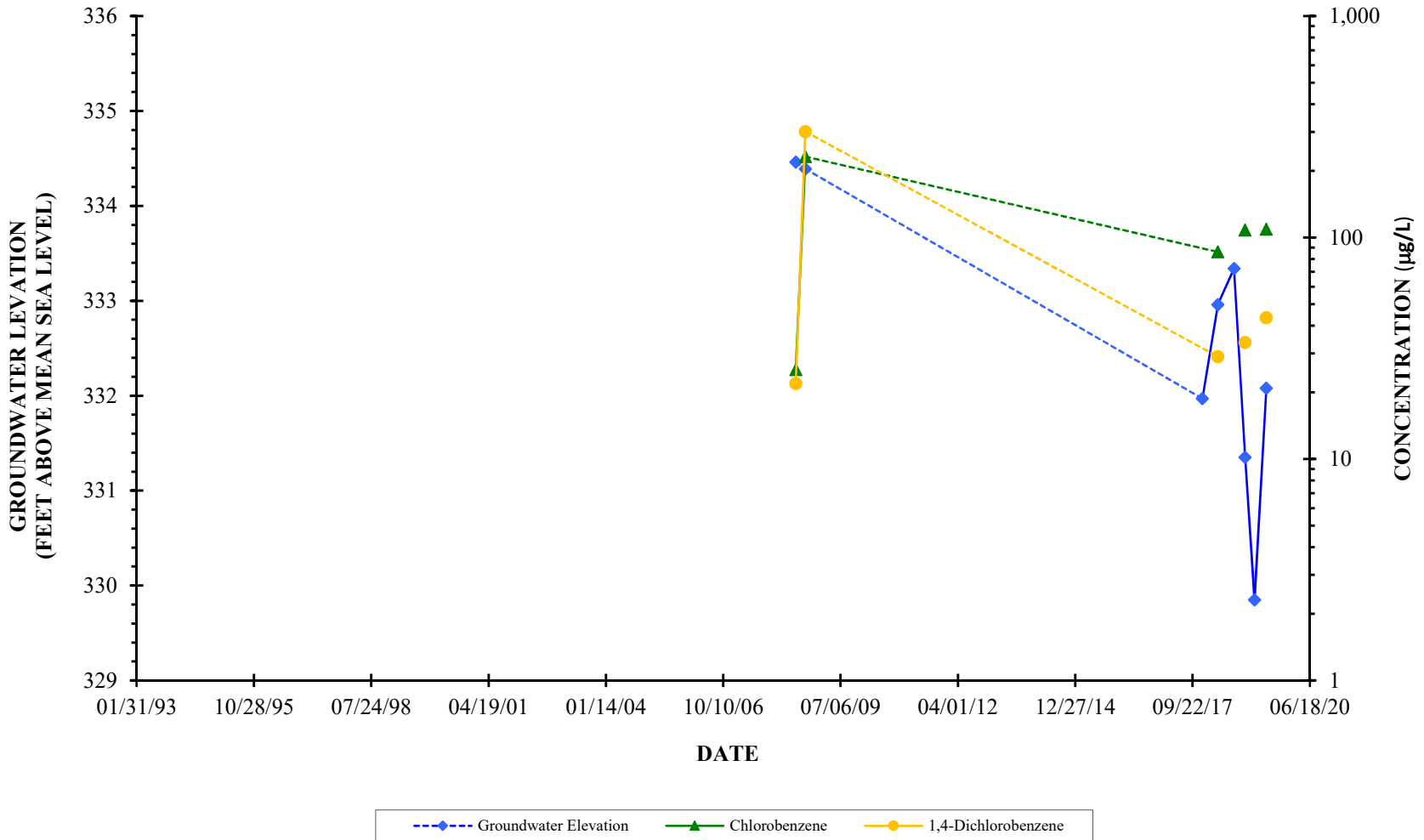
**DEPTH TO GROUNDWATER
UKMW-3
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336**



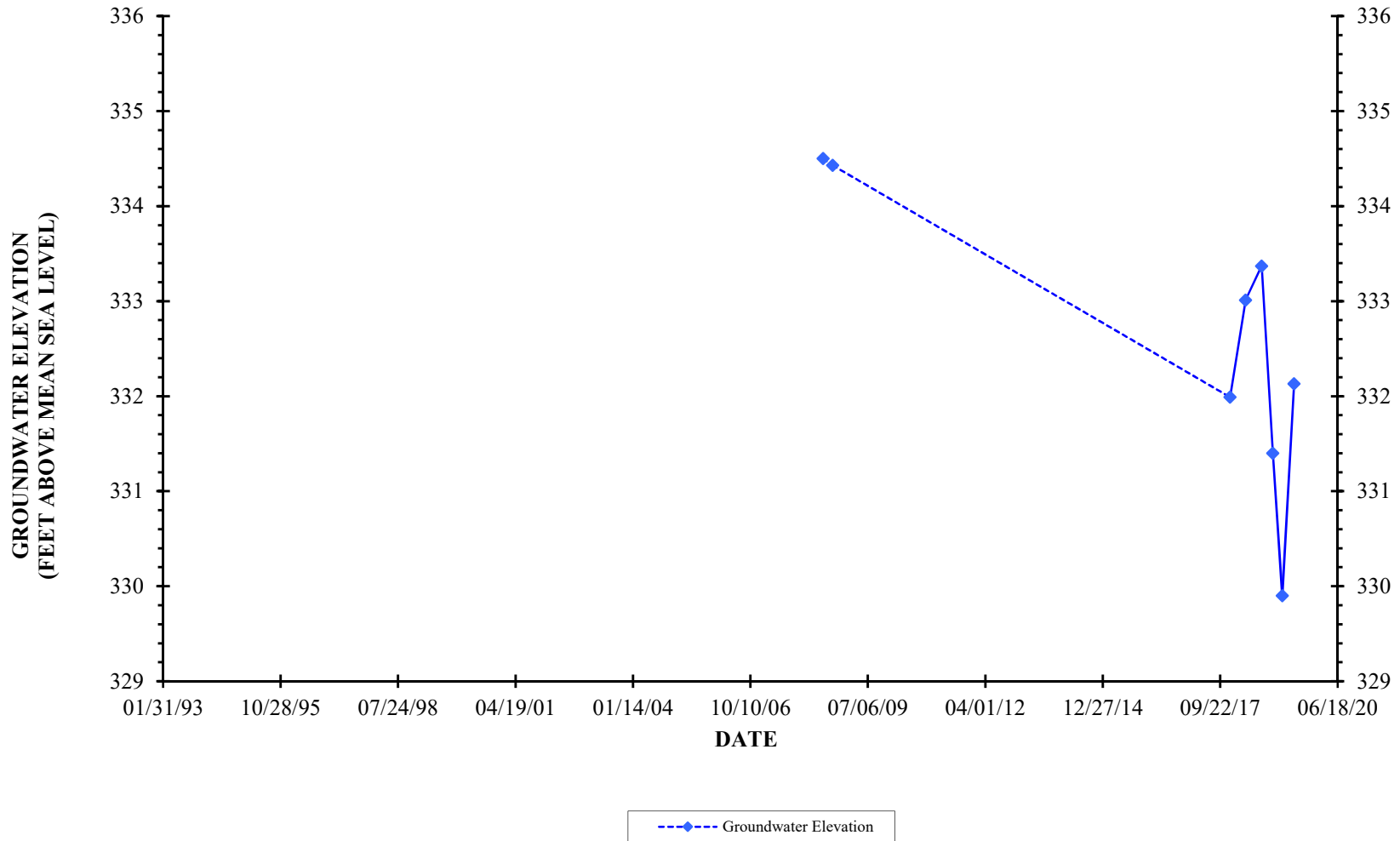
**GROUNDWATER ELEVATION
UKMW-4
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336**



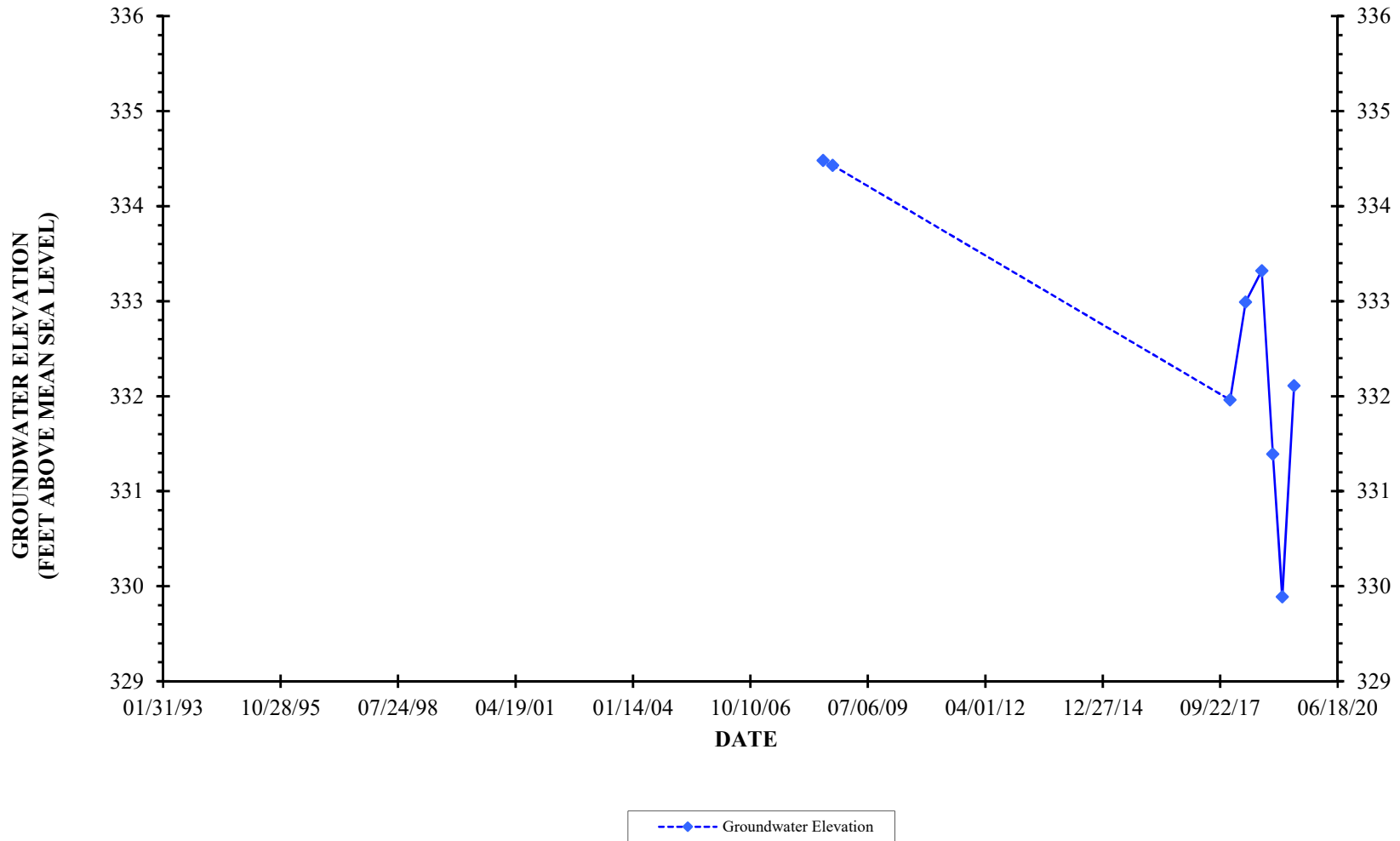
GROUNDWATER ELEVATION / COC ATTENUATION GRAPH
UKMW-5
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336



**GROUNDWATER ELEVATION
UKMW-6
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336**



**GROUNDWATER ELEVATION
UKMW-7
Former U-Haul Facility No. 615081
800-812 West Columbia Drive, Kennewick, Washington 99336**



Appendix E

Key to Symbols and Descriptions and Edited Soil Boring Logs



MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES	Undisturbed Sample	Auger Cuttings		
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel - sand mixtures, little or no fines.	Split Spoon Sample	Bulk Sample		
			GP	Poorly graded gravels or gravel - sand mixtures, little or no fines.			Rock Core	Modified California Ring
		GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel - sand - silt mixtures.	Dilatometer	Pressure Meter		
			GC	Clayey gravels, gravel - sand - clay mixtures.	Packer		No Recovery	
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 Sieve Size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.	Water Table at time of drilling	Water Table after 24 hours		
			SP	Poorly graded sands or gravelly sands, little or no fines.				
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand - silt mixtures				
			SC	Clayey sands, sand - clay mixtures.				
	FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)	ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts and with slight plasticity.	Correlation of Penetration Resistance with Relative Density and Consistency			
			CL	Inorganic lays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.				
OL			Organic silts and organic silty clays of low plasticity.					
SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	SAND & GRAVEL		SILT & CLAY		
		CH	Inorganic clays of high plasticity, fat clays	No. of Blows	Relative Density	No. of Blows	Consistency	
				0 - 4	Very Loose	0 - 1	Very Soft	
		OH	Organic clays of medium to high plasticity, organic silts.	5 - 10	Loose	2 - 4	Soft	
11 - 30	Medium Dense			5 - 8	Medium Stiff			
31 - 50	Dense	9 - 15	Stiff					
Over 50	Very Dense	16 - 30	Very Stiff					
		Over 31	Hard					
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils.				

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

SILT OR CLAY	SAND			GRAVEL		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

No.200 No.40 No.10 No.4 3/4" 3" 12"

U.S. STANDARD SIEVE SIZE

KEY TO SYMBOLS AND DESCRIPTIONS



— AN ATLAS COMPANY —

9185 S. Farmer Avenue, Ste. 111
 Tempe, Arizona 85284
 (480) 894-2056
 (480) 894-2497 fax

Reference: The Unified Soil Classification System, Corps of Engineers, U.S. Army Technical Memorandum No. 3-357, Vol. 1, March, 1953 (Revised April, 1960)

Project FORMER U-HAUL 615081

Location 800-812 W. COLUMBIA DR., KENNEWICK, WA

LOG OF CB-1

SHEET 1 OF 1

Client AREC

Drill Method ROTONSONIC

Elevation (ft amsl) --

Prj. No. 1052508106

Drilling Started 6/27/19 Ended 6/28/19

Total Depth (ft) 10

Logged By L. BROWN

Drill Contractor CASCADE

Depth To Water (ft)

DEPTH (feet)	SAMPLE NO.	BLOWS/6"	PID (ppm)	Sample Time	USCS	LITHOLOGY	DESCRIPTION	COMPLETION DETAILS	DEPTH FEET
					GW		0"-2" - Crushed rock gravel.		Asphalt resurfacing.
2	SS CB-1-2		0.2	1149			Silty sand. Medium brown. Moist. (75% sand, 25% silt)		
	SS CB-1-3		0.2	1150	SM				
4	SS CB-1-5		0.2	1155					
6	SS CB-1-6		450.2	0815			Gravel. Brown. Sub-angular to sub-rounded. Slightly moist. Some odor. Possible staining.		
	SS CB-1-8		588.8	0820	GW				
8	SS CB-1-9.5		397.7	0825					
10			157.6						
			196.3						
							Bottom of hole at 10 feet		

LOG A EVNN05 1052508106 -KENNEWICK.GPJ LOG A EVNN05.GDT 9/11/19



9185 S. Farmer Ave., Ste. 111
 Tempe, Arizona 85284
 Phone: 480.894.2056
 Fax: 480.894.2497

Remarks: Hand augered to five feet below ground surface. Drilling continued from five to ten feet with rotonsonic drilling at 22 degree angle toward the south. Groundwater not encountered.

See key sheet for symbols and abbreviations used above.

DEPTH (feet)	SAMPLE NO.	BLOWS/6"	PID (ppm)	Sample Time	USCS	LITHOLOGY	DESCRIPTION	COMPLETION DETAILS	DEPTH FEET
					GW		0"-2" - Crushed rock gravel.	← Asphalt resurfacing.	
2							Sandy silty. Medium brown. Dry to slightly moist.	← Cement-bentonite grout.	2
3.7	SS CB-2-2.5		0850	SM					4
4									
5.2	SS CB-2-5		0905						
5.4									
6					GW		Gravel and cobbles with sand. Sub-angular to sub-rounded. (60% gravel, 30% sand, 10% silt)		6
6.2					SP		Gravelly sand with silt. Medium sand. Sub-angular to sub-rounded gravel. Moist. (50% sand, 40% gravel, 10% silt)		8
8									
9.9	SS CB-2-9.5		0915		GW		Gravel and cobbles with sand. Sub-angular to sub-rounded. (60% gravel, 30% sand, 10% silt)		8
10							Bottom of hole at 10 feet		10

LOG A EVMN05 1052508106 -KENNEWICK.GPJ LOG A EVMN05.GDT 9/11/19



9185 S. Farmer Ave., Ste. 111
 Tempe, Arizona 85284
 Phone: 480.894.2056
 Fax: 480.894.2497

Remarks: Hand augered to five feet below ground surface. Drilling continued from five to ten feet with rotonsonic drilling. Groundwater not encountered.

See key sheet for symbols and abbreviations used above.

Project FORMER U-HAUL 615081

Location 800-812 W. COLUMBIA DR., KENNEWICK, WA

LOG OF CB-3

SHEET 1 OF 1

Client AREC

Drill Method ROTONSONIC

Elevation (ft amsl) --

Prj. No. 1052508106

Drilling Started 6/27/19 Ended 6/27/19

Total Depth (ft) 10

Logged By L. BROWN

Drill Contractor CASCADE

Depth To Water (ft)

DEPTH (feet)	SAMPLE NO.	BLOWS/6"	PID (ppm)	Sample Time	USCS	LITHOLOGY	DESCRIPTION	COMPLETION DETAILS	DEPTH FEET
					GW		0"-2" - Crushed rock gravel.	← Asphalt resurfacing.	
2			0.1		SM		Silty sand. Medium brown. Moist. (75% sand, 25% silt)	← Cement-bentonite grout.	2
4			0.2						4
5.7	ss		2.1	1125					
6			2.6				Gravel and cobbles with sand. Medium gray. Sub-angular to sub-rounded. (75% gravel, 25% sand)		6
8			2.9						8
8			7.5	1305	GW				
10	ss		5.7	1310					10
Bottom of hole at 10 feet									

LOG A EVNN05 1052508106 -KENNEWICK.GPJ LOG A EVNN05.GDT 9/11/19



9185 S. Farmer Ave., Ste. 111
 Tempe, Arizona 85284
 Phone: 480.894.2056
 Fax: 480.894.2497

Remarks: Hand augered to five feet below ground surface. Drilling continued from five to ten feet with rotonsonic drilling. Groundwater not encountered.

See key sheet for symbols and abbreviations used above.

Project FORMER U-HAUL 615081

Location 800-812 W. COLUMBIA DR., KENNEWICK, WA

LOG OF CB-4

SHEET 1 OF 1

Client AREC

Drill Method ROTONSONIC

Elevation (ft amsl) --

Prj. No. 1052508106

Drilling Started 6/27/19 Ended 6/27/19

Total Depth (ft) 10

Logged By L. BROWN

Drill Contractor CASCADE

Depth To Water (ft)

DEPTH (feet)	SAMPLE NO.	BLOWS/6"	PID (ppm)	Sample Time	USCS	LITHOLOGY	DESCRIPTION	COMPLETION DETAILS	DEPTH FEET
0								Asphalt resurfacing.	0
0.4					GW		0"-2" - Crushed rock gravel.		2
2					SM		Silty sand. Medium Brown. Moist. (75% sand, 25% silt.)		4
5.8	ss		0.2	1105			Gravel and cobbles with sand. Medium brown. Sub-angular to sub-rounded. (60% gravel, 30% sand, 10% silt)		Cement-bentonite grout.
6.6	ss		1.8	1320					8
7.4			8.8		GW				8
8.2			0.8						8
9.0	ss		0.9	1325					10
10							Bottom of hole at 10 feet		10

LOG A EVNN05 1052508106 -KENNEWICK.GPJ LOG A EVNN05.GDT 9/11/19



9185 S. Farmer Ave., Ste. 111
 Tempe, Arizona 85284
 Phone: 480.894.2056
 Fax: 480.894.2497

Remarks: Hand augered to five feet below ground surface. Drilling continued from five to ten feet with rotonsonic drilling. Groundwater not encountered.

See key sheet for symbols and abbreviations used above.

Project FORMER U-HAUL 615081

Location 800-812 W. COLUMBIA DR., KENNEWICK, WA

LOG OF CB-5

SHEET 1 OF 1

Client AREC

Drill Method ROTONSONIC

Elevation (ft amsl) --

Prj. No. 1052508106

Drilling Started 6/27/19 Ended 6/28/19

Total Depth (ft) 10

Logged By L. BROWN

Drill Contractor CASCADE

Depth To Water (ft)

DEPTH (feet)	SAMPLE NO.	BLOWS/6"	PID (ppm)	Sample Time	USCS	LITHOLOGY	DESCRIPTION	COMPLETION DETAILS	DEPTH FEET
0								Asphalt resurfacing.	0
0.1			0.1		GW	0"-2" - Crushed rock gravel.			0.1
4.2			4.2			Silty sand. Medium Brown. Moist. (75% sand, 25% silt.)			4.2
5.5	SS		0.1	1140	SM			Cement-bentonite grout.	5.5
6.2	SS		437	1040					6.2
8.5			2.7			Gravel and cobbles with sand. Medium brown to medium gray. Sub-angular to sub-rounded. (60% gravel, 30% sand, 10% silt)			8.5
10.0	SS		3.0	1045	GW				10.0
10.0							Bottom of hole at 10 feet		10.0

LOG A EVNN05 1052508106 -KENNEWICK.GPJ LOG A EVNN05.GDT 9/11/19



9185 S. Farmer Ave., Ste. 111
 Tempe, Arizona 85284
 Phone: 480.894.2056
 Fax: 480.894.2497

Remarks: Hand augered to five feet below ground surface. Drilling continued from five to ten feet with rotonsonic drilling with 25 degree angle toward the south. Groundwater not encountered.

See key sheet for symbols and abbreviations used above.

Appendix F

Laboratory Analytical Data Report (Soil - June 2019)



July 15, 2019

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

ATC Group Services

Sample Delivery Group: L1114890
Samples Received: 07/02/2019
Project Number: ATCTAZ-041118S
Description: U-Haul Kennewick

Report To: Larry Brown and Edwin Vandegrift
9185 S. Farmer Ave Ste 111
Tempe, AZ 85284

Entire Report Reviewed By:



Olivia Studebaker
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.





Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	6
Sr: Sample Results	7
CB-1-6 L1114890-01	7
CB-1-9.5 L1114890-02	10
CB-2-2.5 L1114890-03	13
CB-2-5 L1114890-04	14
CB-2-9.5 L1114890-05	15
CB-3-5 L1114890-06	16
CB-3-8.5 L1114890-07	17
CB-3-9.5 L1114890-08	18
CB-4-5 L1114890-09	19
CB-4-9.5 L1114890-10	20
CB-5-5 L1114890-11	21
CB-5-9.5 L1114890-12	22
CB-1-5 L1114890-13	23
CB-1-8 L1114890-14	25
CB-5-6 L1114890-15	26
Qc: Quality Control Summary	28
Total Solids by Method 2540 G-2011	28
Volatile Organic Compounds (GC/MS) by Method 8260C	31
Polychlorinated Biphenyls (GC) by Method 8082 A	35
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	36
Gl: Glossary of Terms	42
Al: Accreditations & Locations	43
Sc: Sample Chain of Custody	44

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

SAMPLE SUMMARY



CB-1-6 L1114890-01 Solid

Collected by
Collected date/time
Received date/time
06/28/19 08:15 07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308188	1	07/09/19 13:18	07/09/19 13:27	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1307870	8	06/28/19 08:15	07/08/19 22:13	BMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1309166	1	07/10/19 20:34	07/11/19 21:30	ADF	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 13:23	DMG	Mt. Juliet, TN

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

CB-1-9.5 L1114890-02 Solid

Collected by
Collected date/time
Received date/time
06/28/19 08:25 07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308188	1	07/09/19 13:18	07/09/19 13:27	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1307870	1	06/28/19 08:25	07/08/19 20:04	BMB	Mt. Juliet, TN
Polychlorinated Biphenyls (GC) by Method 8082 A	WG1309166	1	07/10/19 20:34	07/11/19 21:43	RAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 13:44	DMG	Mt. Juliet, TN

CB-2-2.5 L1114890-03 Solid

Collected by
Collected date/time
Received date/time
06/28/19 08:50 07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 14:06	LEA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	20	07/11/19 06:23	07/11/19 20:33	LEA	Mt. Juliet, TN

CB-2-5 L1114890-04 Solid

Collected by
Collected date/time
Received date/time
06/28/19 09:05 07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 14:27	LEA	Mt. Juliet, TN

CB-2-9.5 L1114890-05 Solid

Collected by
Collected date/time
Received date/time
06/28/19 09:15 07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 14:49	LEA	Mt. Juliet, TN

CB-3-5 L1114890-06 Solid

Collected by
Collected date/time
Received date/time
06/27/19 11:25 07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1308630	1	07/10/19 14:46	07/10/19 21:20	DMG	Mt. Juliet, TN

CB-3-8.5 L1114890-07 Solid

Collected by
Collected date/time
Received date/time
06/27/19 13:05 07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1308630	1	07/10/19 14:46	07/10/19 21:41	DMG	Mt. Juliet, TN

SAMPLE SUMMARY



CB-3-9.5 L1114890-08 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
			Collected by		Collected date/time	Received date/time
					06/27/19 13:10	07/02/19 08:45
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1308632	1	07/10/19 06:46	07/10/19 15:24	DMG	Mt. Juliet, TN

1
Cp

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Tc

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Ss

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Cn

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Sr

6
Qc

7
Gl

8
Al

9
Sc

CB-4-5 L1114890-09 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
			Collected by		Collected date/time	Received date/time
					06/27/19 11:05	07/02/19 08:45
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1308632	1	07/10/19 06:46	07/10/19 15:45	DMG	Mt. Juliet, TN

CB-4-9.5 L1114890-10 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
			Collected by		Collected date/time	Received date/time
					06/27/19 13:25	07/02/19 08:45
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1308632	1	07/10/19 06:46	07/10/19 16:50	DMG	Mt. Juliet, TN

CB-5-5 L1114890-11 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
			Collected by		Collected date/time	Received date/time
					06/27/19 11:40	07/02/19 08:45
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1308632	1	07/10/19 06:46	07/10/19 17:11	DMG	Mt. Juliet, TN

CB-5-9.5 L1114890-12 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
			Collected by		Collected date/time	Received date/time
					06/28/19 10:45	07/02/19 08:45
Total Solids by Method 2540 G-2011	WG1308190	1	07/10/19 08:10	07/10/19 08:18	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 15:11	LEA	Mt. Juliet, TN

CB-1-5 L1114890-13 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
			Collected by		Collected date/time	Received date/time
					06/27/19 11:55	07/02/19 08:45
Total Solids by Method 2540 G-2011	WG1308191	1	07/10/19 08:01	07/10/19 08:08	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1307870	1	06/27/19 11:55	07/08/19 20:25	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1308632	1	07/10/19 06:46	07/10/19 17:32	DMG	Mt. Juliet, TN

CB-1-8 L1114890-14 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
			Collected by		Collected date/time	Received date/time
					06/28/19 08:20	07/02/19 08:45
Total Solids by Method 2540 G-2011	WG1308191	1	07/10/19 08:01	07/10/19 08:08	KDW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 15:32	LEA	Mt. Juliet, TN

SAMPLE SUMMARY



CB-5-6 L1114890-15 Solid

Collected by
Collected date/time
Received date/time

06/28/19 10:40
07/02/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG1308191	1	07/10/19 08:01	07/10/19 08:08	KDW	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260C	WG1307870	1	06/28/19 10:40	07/08/19 20:47	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM	WG1309196	1	07/11/19 06:23	07/11/19 15:54	LEA	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Olivia Studebaker
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc



Collected date/time: 06/28/19 08:15

L1114890

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.5		1	07/09/2019 13:27	WG1308188

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	U		0.116	0.212	8	07/08/2019 22:13	WG1307870
Acrylonitrile	U		0.0161	0.106	8	07/08/2019 22:13	WG1307870
Benzene	U		0.00339	0.00846	8	07/08/2019 22:13	WG1307870
Bromobenzene	U		0.00889	0.106	8	07/08/2019 22:13	WG1307870
Bromodichloromethane	U		0.00667	0.0212	8	07/08/2019 22:13	WG1307870
Bromoform	U		0.0506	0.212	8	07/08/2019 22:13	WG1307870
Bromomethane	U		0.0313	0.106	8	07/08/2019 22:13	WG1307870
n-Butylbenzene	0.345		0.0325	0.106	8	07/08/2019 22:13	WG1307870
sec-Butylbenzene	0.248		0.0214	0.106	8	07/08/2019 22:13	WG1307870
tert-Butylbenzene	0.0194	J	0.0131	0.0423	8	07/08/2019 22:13	WG1307870
Carbon tetrachloride	U		0.00914	0.0423	8	07/08/2019 22:13	WG1307870
Chlorobenzene	U		0.00485	0.0212	8	07/08/2019 22:13	WG1307870
Chlorodibromomethane	U		0.00381	0.0212	8	07/08/2019 22:13	WG1307870
Chloroethane	U		0.00914	0.0423	8	07/08/2019 22:13	WG1307870
Chloroform	U		0.00351	0.0212	8	07/08/2019 22:13	WG1307870
Chloromethane	U		0.0117	0.106	8	07/08/2019 22:13	WG1307870
2-Chlorotoluene	U		0.00779	0.0212	8	07/08/2019 22:13	WG1307870
4-Chlorotoluene	U		0.00956	0.0423	8	07/08/2019 22:13	WG1307870
1,2-Dibromo-3-Chloropropane	U		0.0432	0.212	8	07/08/2019 22:13	WG1307870
1,2-Dibromoethane	U		0.00444	0.0212	8	07/08/2019 22:13	WG1307870
Dibromomethane	U		0.00846	0.0423	8	07/08/2019 22:13	WG1307870
1,2-Dichlorobenzene	U		0.0123	0.0423	8	07/08/2019 22:13	WG1307870
1,3-Dichlorobenzene	0.0434		0.0144	0.0423	8	07/08/2019 22:13	WG1307870
1,4-Dichlorobenzene	0.294		0.0167	0.0423	8	07/08/2019 22:13	WG1307870
Dichlorodifluoromethane	U		0.00692	0.0212	8	07/08/2019 22:13	WG1307870
1,1-Dichloroethane	U		0.00487	0.0212	8	07/08/2019 22:13	WG1307870
1,2-Dichloroethane	U		0.00402	0.0212	8	07/08/2019 22:13	WG1307870
1,1-Dichloroethene	U		0.00423	0.0212	8	07/08/2019 22:13	WG1307870
cis-1,2-Dichloroethene	U		0.00584	0.0212	8	07/08/2019 22:13	WG1307870
trans-1,2-Dichloroethene	U		0.0121	0.0423	8	07/08/2019 22:13	WG1307870
1,2-Dichloropropane	U		0.0108	0.0423	8	07/08/2019 22:13	WG1307870
1,1-Dichloropropene	U		0.00592	0.0212	8	07/08/2019 22:13	WG1307870
1,3-Dichloropropane	U		0.0148	0.0423	8	07/08/2019 22:13	WG1307870
cis-1,3-Dichloropropene	U		0.00573	0.0212	8	07/08/2019 22:13	WG1307870
trans-1,3-Dichloropropene	U		0.0129	0.0423	8	07/08/2019 22:13	WG1307870
2,2-Dichloropropane	U		0.00671	0.0212	8	07/08/2019 22:13	WG1307870
Di-isopropyl ether	U		0.00296	0.00846	8	07/08/2019 22:13	WG1307870
Ethylbenzene	U		0.00449	0.0212	8	07/08/2019 22:13	WG1307870
Hexachloro-1,3-butadiene	U		0.108	0.212	8	07/08/2019 22:13	WG1307870
Isopropylbenzene	U		0.00730	0.0212	8	07/08/2019 22:13	WG1307870
p-Isopropyltoluene	0.541		0.0197	0.0423	8	07/08/2019 22:13	WG1307870
2-Butanone (MEK)	U		0.106	0.212	8	07/08/2019 22:13	WG1307870
Methylene Chloride	U		0.0562	0.212	8	07/08/2019 22:13	WG1307870
4-Methyl-2-pentanone (MIBK)	U		0.0846	0.212	8	07/08/2019 22:13	WG1307870
Methyl tert-butyl ether	U		0.00250	0.00846	8	07/08/2019 22:13	WG1307870
Naphthalene	0.365	JO	0.0264	0.106	8	07/08/2019 22:13	WG1307870
n-Propylbenzene	U		0.00999	0.0423	8	07/08/2019 22:13	WG1307870
Styrene	U		0.0231	0.106	8	07/08/2019 22:13	WG1307870
1,1,1,2-Tetrachloroethane	U		0.00423	0.0212	8	07/08/2019 22:13	WG1307870
1,1,2,2-Tetrachloroethane	U		0.00330	0.0212	8	07/08/2019 22:13	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 06/28/19 08:15

L1114890

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.00571	0.0212	8	07/08/2019 22:13	WG1307870
Tetrachloroethene	U		0.00592	0.0212	8	07/08/2019 22:13	WG1307870
Toluene	U		0.0106	0.0423	8	07/08/2019 22:13	WG1307870
1,2,3-Trichlorobenzene	U	<u>JO</u>	0.00529	0.0212	8	07/08/2019 22:13	WG1307870
1,2,4-Trichlorobenzene	U	<u>JO</u>	0.0408	0.106	8	07/08/2019 22:13	WG1307870
1,1,1-Trichloroethane	U		0.00233	0.0212	8	07/08/2019 22:13	WG1307870
1,1,2-Trichloroethane	U		0.00747	0.0212	8	07/08/2019 22:13	WG1307870
Trichloroethene	U		0.00339	0.00846	8	07/08/2019 22:13	WG1307870
Trichlorofluoromethane	U		0.00423	0.0212	8	07/08/2019 22:13	WG1307870
1,2,3-Trichloropropane	U		0.0432	0.106	8	07/08/2019 22:13	WG1307870
1,2,4-Trimethylbenzene	0.669		0.00982	0.0423	8	07/08/2019 22:13	WG1307870
1,2,3-Trimethylbenzene	0.0839		0.00973	0.0423	8	07/08/2019 22:13	WG1307870
Vinyl chloride	U		0.00578	0.0212	8	07/08/2019 22:13	WG1307870
1,3,5-Trimethylbenzene	0.679		0.00914	0.0423	8	07/08/2019 22:13	WG1307870
Xylenes, Total	U		0.0404	0.0550	8	07/08/2019 22:13	WG1307870
(S) Toluene-d8	105			75.0-131		07/08/2019 22:13	WG1307870
(S) 4-Bromofluorobenzene	230	<u>J1</u>		67.0-138		07/08/2019 22:13	WG1307870
(S) 1,2-Dichloroethane-d4	95.9			70.0-130		07/08/2019 22:13	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00370	0.0180	1	07/11/2019 21:30	WG1309166
PCB 1221	U		0.00568	0.0180	1	07/11/2019 21:30	WG1309166
PCB 1232	U		0.00441	0.0180	1	07/11/2019 21:30	WG1309166
PCB 1242	0.926		0.00336	0.0180	1	07/11/2019 21:30	WG1309166
PCB 1248	U		0.00333	0.0180	1	07/11/2019 21:30	WG1309166
PCB 1254	0.111		0.00499	0.0180	1	07/11/2019 21:30	WG1309166
PCB 1260	U		0.00523	0.0180	1	07/11/2019 21:30	WG1309166
Total PCBs	1.04		0.000106	0.000529	1	07/11/2019 21:30	WG1309166
(S) Decachlorobiphenyl	67.7			10.0-135		07/11/2019 21:30	WG1309166
(S) Tetrachloro-m-xylene	78.0			10.0-139		07/11/2019 21:30	WG1309166

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.0383		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Acenaphthene	0.0389		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Acenaphthylene	U		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Benzo(a)anthracene	0.000670	<u>J</u>	0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Benzo(a)pyrene	0.0193		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Benzo(b)fluoranthene	U		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Benzo(g,h,i)perylene	0.00686		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Benzo(k)fluoranthene	U		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Chrysene	0.0105		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Dibenz(a,h)anthracene	U		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Fluoranthene	0.0145		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Fluorene	0.0385		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Indeno(1,2,3-cd)pyrene	0.00141	<u>J</u>	0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Naphthalene	0.295		0.00212	0.0212	1	07/11/2019 13:23	WG1309196
Phenanthrene	0.0639		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
Pyrene	0.0450		0.000635	0.00635	1	07/11/2019 13:23	WG1309196
1-Methylnaphthalene	0.665		0.00212	0.0212	1	07/11/2019 13:23	WG1309196
2-Methylnaphthalene	0.00212	<u>J</u>	0.00212	0.0212	1	07/11/2019 13:23	WG1309196
2-Chloronaphthalene	U		0.00212	0.0212	1	07/11/2019 13:23	WG1309196



Collected date/time: 06/28/19 08:15

L1114890

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) Nitrobenzene-d5	848	J1		14.0-149		07/11/2019 13:23	WG1309196
(S) 2-Fluorobiphenyl	78.8			34.0-125		07/11/2019 13:23	WG1309196
(S) p-Terphenyl-d14	81.1			23.0-120		07/11/2019 13:23	WG1309196

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.7		1	07/09/2019 13:27	WG1308188

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0162	J	0.0140	0.0256	1	07/08/2019 20:04	WG1307870
Acrylonitrile	U		0.00194	0.0128	1	07/08/2019 20:04	WG1307870
Benzene	U		0.000409	0.00102	1	07/08/2019 20:04	WG1307870
Bromobenzene	U		0.00107	0.0128	1	07/08/2019 20:04	WG1307870
Bromodichloromethane	U		0.000807	0.00256	1	07/08/2019 20:04	WG1307870
Bromoform	U		0.00612	0.0256	1	07/08/2019 20:04	WG1307870
Bromomethane	U		0.00379	0.0128	1	07/08/2019 20:04	WG1307870
n-Butylbenzene	0.0359		0.00393	0.0128	1	07/08/2019 20:04	WG1307870
sec-Butylbenzene	0.0136		0.00259	0.0128	1	07/08/2019 20:04	WG1307870
tert-Butylbenzene	U		0.00159	0.00512	1	07/08/2019 20:04	WG1307870
Carbon tetrachloride	U		0.00111	0.00512	1	07/08/2019 20:04	WG1307870
Chlorobenzene	U		0.000587	0.00256	1	07/08/2019 20:04	WG1307870
Chlorodibromomethane	U		0.000461	0.00256	1	07/08/2019 20:04	WG1307870
Chloroethane	U		0.00111	0.00512	1	07/08/2019 20:04	WG1307870
Chloroform	U		0.000425	0.00256	1	07/08/2019 20:04	WG1307870
Chloromethane	U		0.00142	0.0128	1	07/08/2019 20:04	WG1307870
2-Chlorotoluene	U		0.000942	0.00256	1	07/08/2019 20:04	WG1307870
4-Chlorotoluene	U		0.00116	0.00512	1	07/08/2019 20:04	WG1307870
1,2-Dibromo-3-Chloropropane	U		0.00522	0.0256	1	07/08/2019 20:04	WG1307870
1,2-Dibromoethane	U		0.000537	0.00256	1	07/08/2019 20:04	WG1307870
Dibromomethane	U		0.00102	0.00512	1	07/08/2019 20:04	WG1307870
1,2-Dichlorobenzene	0.0284		0.00148	0.00512	1	07/08/2019 20:04	WG1307870
1,3-Dichlorobenzene	0.00662		0.00174	0.00512	1	07/08/2019 20:04	WG1307870
1,4-Dichlorobenzene	0.0454		0.00202	0.00512	1	07/08/2019 20:04	WG1307870
Dichlorodifluoromethane	U		0.000837	0.00256	1	07/08/2019 20:04	WG1307870
1,1-Dichloroethane	U		0.000589	0.00256	1	07/08/2019 20:04	WG1307870
1,2-Dichloroethane	U		0.000486	0.00256	1	07/08/2019 20:04	WG1307870
1,1-Dichloroethene	U		0.000512	0.00256	1	07/08/2019 20:04	WG1307870
cis-1,2-Dichloroethene	U		0.000706	0.00256	1	07/08/2019 20:04	WG1307870
trans-1,2-Dichloroethene	U		0.00146	0.00512	1	07/08/2019 20:04	WG1307870
1,2-Dichloropropane	U		0.00130	0.00512	1	07/08/2019 20:04	WG1307870
1,1-Dichloropropene	U		0.000717	0.00256	1	07/08/2019 20:04	WG1307870
1,3-Dichloropropane	U		0.00179	0.00512	1	07/08/2019 20:04	WG1307870
cis-1,3-Dichloropropene	U		0.000694	0.00256	1	07/08/2019 20:04	WG1307870
trans-1,3-Dichloropropene	U		0.00157	0.00512	1	07/08/2019 20:04	WG1307870
2,2-Dichloropropane	U		0.000812	0.00256	1	07/08/2019 20:04	WG1307870
Di-isopropyl ether	U		0.000358	0.00102	1	07/08/2019 20:04	WG1307870
Ethylbenzene	U		0.000543	0.00256	1	07/08/2019 20:04	WG1307870
Hexachloro-1,3-butadiene	U		0.0130	0.0256	1	07/08/2019 20:04	WG1307870
Isopropylbenzene	U		0.000883	0.00256	1	07/08/2019 20:04	WG1307870
p-Isopropyltoluene	0.0249		0.00239	0.00512	1	07/08/2019 20:04	WG1307870
2-Butanone (MEK)	0.0450	B	0.0128	0.0256	1	07/08/2019 20:04	WG1307870
Methylene Chloride	U		0.00680	0.0256	1	07/08/2019 20:04	WG1307870
4-Methyl-2-pentanone (MIBK)	U		0.0102	0.0256	1	07/08/2019 20:04	WG1307870
Methyl tert-butyl ether	U		0.000302	0.00102	1	07/08/2019 20:04	WG1307870
Naphthalene	0.0709	JO	0.00319	0.0128	1	07/08/2019 20:04	WG1307870
n-Propylbenzene	U		0.00121	0.00512	1	07/08/2019 20:04	WG1307870
Styrene	U		0.00279	0.0128	1	07/08/2019 20:04	WG1307870
1,1,1,2-Tetrachloroethane	U		0.000512	0.00256	1	07/08/2019 20:04	WG1307870
1,1,2,2-Tetrachloroethane	U		0.000399	0.00256	1	07/08/2019 20:04	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 06/28/19 08:25

L1114890

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000691	0.00256	1	07/08/2019 20:04	WG1307870
Tetrachloroethene	U		0.000717	0.00256	1	07/08/2019 20:04	WG1307870
Toluene	U		0.00128	0.00512	1	07/08/2019 20:04	WG1307870
1,2,3-Trichlorobenzene	U	JO	0.000640	0.00256	1	07/08/2019 20:04	WG1307870
1,2,4-Trichlorobenzene	U	JO	0.00493	0.0128	1	07/08/2019 20:04	WG1307870
1,1,1-Trichloroethane	U		0.000282	0.00256	1	07/08/2019 20:04	WG1307870
1,1,2-Trichloroethane	U		0.000904	0.00256	1	07/08/2019 20:04	WG1307870
Trichloroethene	U		0.000409	0.00102	1	07/08/2019 20:04	WG1307870
Trichlorofluoromethane	U		0.000512	0.00256	1	07/08/2019 20:04	WG1307870
1,2,3-Trichloropropane	U		0.00522	0.0128	1	07/08/2019 20:04	WG1307870
1,2,4-Trimethylbenzene	0.0779		0.00119	0.00512	1	07/08/2019 20:04	WG1307870
1,2,3-Trimethylbenzene	0.0518		0.00118	0.00512	1	07/08/2019 20:04	WG1307870
Vinyl chloride	U		0.000699	0.00256	1	07/08/2019 20:04	WG1307870
1,3,5-Trimethylbenzene	0.00675		0.00111	0.00512	1	07/08/2019 20:04	WG1307870
Xylenes, Total	U		0.00489	0.00665	1	07/08/2019 20:04	WG1307870
(S) Toluene-d8	106			75.0-131		07/08/2019 20:04	WG1307870
(S) 4-Bromofluorobenzene	119			67.0-138		07/08/2019 20:04	WG1307870
(S) 1,2-Dichloroethane-d4	96.5			70.0-130		07/08/2019 20:04	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Polychlorinated Biphenyls (GC) by Method 8082 A

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
PCB 1016	U		0.00358	0.0174	1	07/11/2019 21:43	WG1309166
PCB 1221	U		0.00550	0.0174	1	07/11/2019 21:43	WG1309166
PCB 1232	U		0.00427	0.0174	1	07/11/2019 21:43	WG1309166
PCB 1242	0.107		0.00326	0.0174	1	07/11/2019 21:43	WG1309166
PCB 1248	U		0.00322	0.0174	1	07/11/2019 21:43	WG1309166
PCB 1254	U		0.00483	0.0174	1	07/11/2019 21:43	WG1309166
PCB 1260	U		0.00506	0.0174	1	07/11/2019 21:43	WG1309166
Total PCBs	0.107		0.000102	0.000512	1	07/11/2019 21:43	WG1309166
(S) Decachlorobiphenyl	75.3			10.0-135		07/11/2019 21:43	WG1309166
(S) Tetrachloro-m-xylene	83.7			10.0-139		07/11/2019 21:43	WG1309166

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	0.00602	U	0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Acenaphthene	0.00825		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Acenaphthylene	U		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Benzo(a)anthracene	U		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Benzo(a)pyrene	0.000618	U	0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Benzo(b)fluoranthene	U		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Benzo(g,h,i)perylene	0.00121	U	0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Benzo(k)fluoranthene	0.00102	U	0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Chrysene	U		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Dibenz(a,h)anthracene	U		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Fluoranthene	0.00248	U	0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Fluorene	0.0101		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Indeno(1,2,3-cd)pyrene	U		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Naphthalene	0.0634		0.00205	0.0205	1	07/11/2019 13:44	WG1309196
Phenanthrene	0.0153		0.000614	0.00614	1	07/11/2019 13:44	WG1309196
Pyrene	0.00472	U	0.000614	0.00614	1	07/11/2019 13:44	WG1309196
1-Methylnaphthalene	0.190		0.00205	0.0205	1	07/11/2019 13:44	WG1309196
2-Methylnaphthalene	0.156		0.00205	0.0205	1	07/11/2019 13:44	WG1309196
2-Chloronaphthalene	U		0.00205	0.0205	1	07/11/2019 13:44	WG1309196



Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
(S) Nitrobenzene-d5	47.7			14.0-149		07/11/2019 13:44	WG1309196
(S) 2-Fluorobiphenyl	70.4			34.0-125		07/11/2019 13:44	WG1309196
(S) p-Terphenyl-d14	75.0			23.0-120		07/11/2019 13:44	WG1309196

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.7		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	0.479		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Acenaphthene	0.0144		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Acenaphthylene	U		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Benzo(a)anthracene	4.26		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Benzo(a)pyrene	2.69		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Benzo(b)fluoranthene	3.62		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Benzo(g,h,i)perylene	0.916		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Benzo(k)fluoranthene	1.03		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Chrysene	4.98		0.0134	0.134	20	07/11/2019 20:33	WG1309196
Dibenz(a,h)anthracene	0.329		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Fluoranthene	6.37		0.0134	0.134	20	07/11/2019 20:33	WG1309196
Fluorene	0.0147		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Indeno(1,2,3-cd)pyrene	0.899		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Naphthalene	U		0.00223	0.0223	1	07/11/2019 14:06	WG1309196
Phenanthrene	1.03		0.000669	0.00669	1	07/11/2019 14:06	WG1309196
Pyrene	8.67		0.0134	0.134	20	07/11/2019 20:33	WG1309196
1-Methylnaphthalene	U		0.00223	0.0223	1	07/11/2019 14:06	WG1309196
2-Methylnaphthalene	U		0.00223	0.0223	1	07/11/2019 14:06	WG1309196
2-Chloronaphthalene	U		0.00223	0.0223	1	07/11/2019 14:06	WG1309196
(S) Nitrobenzene-d5	65.7	J7		14.0-149		07/11/2019 20:33	WG1309196
(S) Nitrobenzene-d5	55.5			14.0-149		07/11/2019 14:06	WG1309196
(S) 2-Fluorobiphenyl	57.3			34.0-125		07/11/2019 14:06	WG1309196
(S) 2-Fluorobiphenyl	58.9	J7		34.0-125		07/11/2019 20:33	WG1309196
(S) p-Terphenyl-d14	76.1	J7		23.0-120		07/11/2019 20:33	WG1309196
(S) p-Terphenyl-d14	73.1			23.0-120		07/11/2019 14:06	WG1309196

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.8		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	0.00303	J	0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Acenaphthene	U		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Acenaphthylene	U		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Benzo(a)anthracene	0.0384		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Benzo(a)pyrene	0.0539		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Benzo(b)fluoranthene	0.0838		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Benzo(g,h,i)perylene	0.0476		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Benzo(k)fluoranthene	0.0232		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Chrysene	0.0501		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Dibenz(a,h)anthracene	0.00993		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Fluoranthene	0.0873		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Fluorene	0.000871	J	0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Indeno(1,2,3-cd)pyrene	0.0392		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Naphthalene	U		0.00223	0.0223	1	07/11/2019 14:27	WG1309196
Phenanthrene	0.0215		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
Pyrene	0.0700		0.000668	0.00668	1	07/11/2019 14:27	WG1309196
1-Methylnaphthalene	U		0.00223	0.0223	1	07/11/2019 14:27	WG1309196
2-Methylnaphthalene	U		0.00223	0.0223	1	07/11/2019 14:27	WG1309196
2-Chloronaphthalene	U		0.00223	0.0223	1	07/11/2019 14:27	WG1309196
(S) Nitrobenzene-d5	68.8			14.0-149		07/11/2019 14:27	WG1309196
(S) 2-Fluorobiphenyl	71.1			34.0-125		07/11/2019 14:27	WG1309196
(S) p-Terphenyl-d14	75.3			23.0-120		07/11/2019 14:27	WG1309196

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.4		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Acenaphthene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Acenaphthylene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Benzo(a)anthracene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Benzo(a)pyrene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Benzo(b)fluoranthene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Benzo(g,h,i)perylene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Benzo(k)fluoranthene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Chrysene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Dibenz(a,h)anthracene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Fluoranthene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Fluorene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Indeno(1,2,3-cd)pyrene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Naphthalene	U		0.00212	0.0212	1	07/11/2019 14:49	WG1309196
Phenanthrene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
Pyrene	U		0.000635	0.00635	1	07/11/2019 14:49	WG1309196
1-Methylnaphthalene	U		0.00212	0.0212	1	07/11/2019 14:49	WG1309196
2-Methylnaphthalene	U		0.00212	0.0212	1	07/11/2019 14:49	WG1309196
2-Chloronaphthalene	U		0.00212	0.0212	1	07/11/2019 14:49	WG1309196
(S) Nitrobenzene-d5	90.9			14.0-149		07/11/2019 14:49	WG1309196
(S) 2-Fluorobiphenyl	83.8			34.0-125		07/11/2019 14:49	WG1309196
(S) p-Terphenyl-d14	88.1			23.0-120		07/11/2019 14:49	WG1309196

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	85.8		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Acenaphthene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Acenaphthylene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Benzo(a)anthracene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Benzo(a)pyrene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Benzo(b)fluoranthene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Benzo(g,h,i)perylene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Benzo(k)fluoranthene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Chrysene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Dibenz(a,h)anthracene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Fluoranthene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Fluorene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Indeno(1,2,3-cd)pyrene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Naphthalene	U		0.00233	0.0233	1	07/10/2019 21:20	WG1308630
Phenanthrene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
Pyrene	U		0.000699	0.00699	1	07/10/2019 21:20	WG1308630
1-Methylnaphthalene	U		0.00233	0.0233	1	07/10/2019 21:20	WG1308630
2-Methylnaphthalene	U		0.00233	0.0233	1	07/10/2019 21:20	WG1308630
2-Chloronaphthalene	U		0.00233	0.0233	1	07/10/2019 21:20	WG1308630
(S) Nitrobenzene-d5	78.1			14.0-149		07/10/2019 21:20	WG1308630
(S) 2-Fluorobiphenyl	76.2			34.0-125		07/10/2019 21:20	WG1308630
(S) p-Terphenyl-d14	86.6			23.0-120		07/10/2019 21:20	WG1308630

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.3		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Acenaphthene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Acenaphthylene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Benzo(a)anthracene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Benzo(a)pyrene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Benzo(b)fluoranthene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Benzo(g,h,i)perylene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Benzo(k)fluoranthene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Chrysene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Dibenz(a,h)anthracene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Fluoranthene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Fluorene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Indeno(1,2,3-cd)pyrene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Naphthalene	U		0.00208	0.0208	1	07/10/2019 21:41	WG1308630
Phenanthrene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
Pyrene	U		0.000623	0.00623	1	07/10/2019 21:41	WG1308630
1-Methylnaphthalene	U		0.00208	0.0208	1	07/10/2019 21:41	WG1308630
2-Methylnaphthalene	U		0.00208	0.0208	1	07/10/2019 21:41	WG1308630
2-Chloronaphthalene	U		0.00208	0.0208	1	07/10/2019 21:41	WG1308630
(S) Nitrobenzene-d5	105			14.0-149		07/10/2019 21:41	WG1308630
(S) 2-Fluorobiphenyl	103			34.0-125		07/10/2019 21:41	WG1308630
(S) p-Terphenyl-d14	104			23.0-120		07/10/2019 21:41	WG1308630

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.0		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Acenaphthene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Acenaphthylene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Benzo(a)anthracene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Benzo(a)pyrene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Benzo(b)fluoranthene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Benzo(g,h,i)perylene	0.000867	J	0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Benzo(k)fluoranthene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Chrysene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Dibenz(a,h)anthracene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Fluoranthene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Fluorene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Indeno(1,2,3-cd)pyrene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Naphthalene	U		0.00213	0.0213	1	07/10/2019 15:24	WG1308632
Phenanthrene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
Pyrene	U		0.000638	0.00638	1	07/10/2019 15:24	WG1308632
1-Methylnaphthalene	U		0.00213	0.0213	1	07/10/2019 15:24	WG1308632
2-Methylnaphthalene	U		0.00213	0.0213	1	07/10/2019 15:24	WG1308632
2-Chloronaphthalene	U		0.00213	0.0213	1	07/10/2019 15:24	WG1308632
(S) Nitrobenzene-d5	78.0			14.0-149		07/10/2019 15:24	WG1308632
(S) 2-Fluorobiphenyl	78.6			34.0-125		07/10/2019 15:24	WG1308632
(S) p-Terphenyl-d14	86.6			23.0-120		07/10/2019 15:24	WG1308632

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	84.3		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Acenaphthene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Acenaphthylene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Benzo(a)anthracene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Benzo(a)pyrene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Benzo(b)fluoranthene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Benzo(g,h,i)perylene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Benzo(k)fluoranthene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Chrysene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Dibenz(a,h)anthracene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Fluoranthene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Fluorene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Indeno(1,2,3-cd)pyrene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Naphthalene	U		0.00237	0.0237	1	07/10/2019 15:45	WG1308632
Phenanthrene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
Pyrene	U		0.000712	0.00712	1	07/10/2019 15:45	WG1308632
1-Methylnaphthalene	U		0.00237	0.0237	1	07/10/2019 15:45	WG1308632
2-Methylnaphthalene	U		0.00237	0.0237	1	07/10/2019 15:45	WG1308632
2-Chloronaphthalene	U		0.00237	0.0237	1	07/10/2019 15:45	WG1308632
(S) Nitrobenzene-d5	61.4			14.0-149		07/10/2019 15:45	WG1308632
(S) 2-Fluorobiphenyl	58.8			34.0-125		07/10/2019 15:45	WG1308632
(S) p-Terphenyl-d14	59.1			23.0-120		07/10/2019 15:45	WG1308632

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	96.5		1	07/10/2019 08:18	WG1308190

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Acenaphthene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Acenaphthylene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Benzo(a)anthracene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Benzo(a)pyrene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Benzo(b)fluoranthene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Benzo(g,h,i)perylene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Benzo(k)fluoranthene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Chrysene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Dibenz(a,h)anthracene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Fluoranthene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Fluorene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Indeno(1,2,3-cd)pyrene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Naphthalene	U		0.00207	0.0207	1	07/10/2019 16:50	WG1308632
Phenanthrene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
Pyrene	U		0.000622	0.00622	1	07/10/2019 16:50	WG1308632
1-Methylnaphthalene	U		0.00207	0.0207	1	07/10/2019 16:50	WG1308632
2-Methylnaphthalene	U		0.00207	0.0207	1	07/10/2019 16:50	WG1308632
2-Chloronaphthalene	U		0.00207	0.0207	1	07/10/2019 16:50	WG1308632
(S) Nitrobenzene-d5	77.9			14.0-149		07/10/2019 16:50	WG1308632
(S) 2-Fluorobiphenyl	80.2			34.0-125		07/10/2019 16:50	WG1308632
(S) p-Terphenyl-d14	86.7			23.0-120		07/10/2019 16:50	WG1308632



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.8		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Acenaphthene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Acenaphthylene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Benzo(a)anthracene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Benzo(a)pyrene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Benzo(b)fluoranthene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Benzo(g,h,i)perylene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Benzo(k)fluoranthene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Chrysene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Dibenz(a,h)anthracene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Fluoranthene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Fluorene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Indeno(1,2,3-cd)pyrene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Naphthalene	U		0.00239	0.0239	1	07/10/2019 17:11	WG1308632
Phenanthrene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
Pyrene	U		0.000716	0.00716	1	07/10/2019 17:11	WG1308632
1-Methylnaphthalene	U		0.00239	0.0239	1	07/10/2019 17:11	WG1308632
2-Methylnaphthalene	U		0.00239	0.0239	1	07/10/2019 17:11	WG1308632
2-Chloronaphthalene	U		0.00239	0.0239	1	07/10/2019 17:11	WG1308632
(S) Nitrobenzene-d5	60.1			14.0-149		07/10/2019 17:11	WG1308632
(S) 2-Fluorobiphenyl	63.5			34.0-125		07/10/2019 17:11	WG1308632
(S) p-Terphenyl-d14	72.0			23.0-120		07/10/2019 17:11	WG1308632

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.3		1	07/10/2019 08:18	WG1308190

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Acenaphthene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Acenaphthylene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Benzo(a)anthracene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Benzo(a)pyrene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Benzo(b)fluoranthene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Benzo(g,h,i)perylene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Benzo(k)fluoranthene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Chrysene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Dibenz(a,h)anthracene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Fluoranthene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Fluorene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Indeno(1,2,3-cd)pyrene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Naphthalene	U		0.00206	0.0206	1	07/11/2019 15:11	WG1309196
Phenanthrene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
Pyrene	U		0.000617	0.00617	1	07/11/2019 15:11	WG1309196
1-Methylnaphthalene	U		0.00206	0.0206	1	07/11/2019 15:11	WG1309196
2-Methylnaphthalene	U		0.00206	0.0206	1	07/11/2019 15:11	WG1309196
2-Chloronaphthalene	U		0.00206	0.0206	1	07/11/2019 15:11	WG1309196
(S) Nitrobenzene-d5	66.6			14.0-149		07/11/2019 15:11	WG1309196
(S) 2-Fluorobiphenyl	68.0			34.0-125		07/11/2019 15:11	WG1309196
(S) p-Terphenyl-d14	73.1			23.0-120		07/11/2019 15:11	WG1309196

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	83.7		1	07/10/2019 08:08	WG1308191

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0190	<u>J</u>	0.0164	0.0299	1	07/08/2019 20:25	WG1307870
Acrylonitrile	U		0.00227	0.0149	1	07/08/2019 20:25	WG1307870
Benzene	U		0.000478	0.00119	1	07/08/2019 20:25	WG1307870
Bromobenzene	U		0.00125	0.0149	1	07/08/2019 20:25	WG1307870
Bromodichloromethane	U		0.000941	0.00299	1	07/08/2019 20:25	WG1307870
Bromoform	U		0.00714	0.0299	1	07/08/2019 20:25	WG1307870
Bromomethane	U		0.00442	0.0149	1	07/08/2019 20:25	WG1307870
n-Butylbenzene	U		0.00459	0.0149	1	07/08/2019 20:25	WG1307870
sec-Butylbenzene	U		0.00302	0.0149	1	07/08/2019 20:25	WG1307870
tert-Butylbenzene	U		0.00185	0.00597	1	07/08/2019 20:25	WG1307870
Carbon tetrachloride	U		0.00129	0.00597	1	07/08/2019 20:25	WG1307870
Chlorobenzene	U		0.000684	0.00299	1	07/08/2019 20:25	WG1307870
Chlorodibromomethane	U		0.000537	0.00299	1	07/08/2019 20:25	WG1307870
Chloroethane	U		0.00129	0.00597	1	07/08/2019 20:25	WG1307870
Chloroform	U		0.000496	0.00299	1	07/08/2019 20:25	WG1307870
Chloromethane	U		0.00166	0.0149	1	07/08/2019 20:25	WG1307870
2-Chlorotoluene	U		0.00110	0.00299	1	07/08/2019 20:25	WG1307870
4-Chlorotoluene	U		0.00135	0.00597	1	07/08/2019 20:25	WG1307870
1,2-Dibromo-3-Chloropropane	U		0.00609	0.0299	1	07/08/2019 20:25	WG1307870
1,2-Dibromoethane	U		0.000627	0.00299	1	07/08/2019 20:25	WG1307870
Dibromomethane	U		0.00119	0.00597	1	07/08/2019 20:25	WG1307870
1,2-Dichlorobenzene	U		0.00173	0.00597	1	07/08/2019 20:25	WG1307870
1,3-Dichlorobenzene	U		0.00203	0.00597	1	07/08/2019 20:25	WG1307870
1,4-Dichlorobenzene	U		0.00235	0.00597	1	07/08/2019 20:25	WG1307870
Dichlorodifluoromethane	U		0.000977	0.00299	1	07/08/2019 20:25	WG1307870
1,1-Dichloroethane	U		0.000687	0.00299	1	07/08/2019 20:25	WG1307870
1,2-Dichloroethane	U		0.000567	0.00299	1	07/08/2019 20:25	WG1307870
1,1-Dichloroethene	U		0.000597	0.00299	1	07/08/2019 20:25	WG1307870
cis-1,2-Dichloroethene	U		0.000824	0.00299	1	07/08/2019 20:25	WG1307870
trans-1,2-Dichloroethene	U		0.00171	0.00597	1	07/08/2019 20:25	WG1307870
1,2-Dichloropropane	U		0.00152	0.00597	1	07/08/2019 20:25	WG1307870
1,1-Dichloropropene	U		0.000836	0.00299	1	07/08/2019 20:25	WG1307870
1,3-Dichloropropane	U		0.00209	0.00597	1	07/08/2019 20:25	WG1307870
cis-1,3-Dichloropropene	U		0.000810	0.00299	1	07/08/2019 20:25	WG1307870
trans-1,3-Dichloropropene	U		0.00183	0.00597	1	07/08/2019 20:25	WG1307870
2,2-Dichloropropane	U		0.000947	0.00299	1	07/08/2019 20:25	WG1307870
Di-isopropyl ether	U		0.000418	0.00119	1	07/08/2019 20:25	WG1307870
Ethylbenzene	U		0.000633	0.00299	1	07/08/2019 20:25	WG1307870
Hexachloro-1,3-butadiene	U		0.0152	0.0299	1	07/08/2019 20:25	WG1307870
Isopropylbenzene	U		0.00103	0.00299	1	07/08/2019 20:25	WG1307870
p-Isopropyltoluene	U		0.00278	0.00597	1	07/08/2019 20:25	WG1307870
2-Butanone (MEK)	0.0517	<u>B</u>	0.0149	0.0299	1	07/08/2019 20:25	WG1307870
Methylene Chloride	U		0.00793	0.0299	1	07/08/2019 20:25	WG1307870
4-Methyl-2-pentanone (MIBK)	U		0.0119	0.0299	1	07/08/2019 20:25	WG1307870
Methyl tert-butyl ether	U		0.000352	0.00119	1	07/08/2019 20:25	WG1307870
Naphthalene	0.00953	<u>J JO</u>	0.00373	0.0149	1	07/08/2019 20:25	WG1307870
n-Propylbenzene	U		0.00141	0.00597	1	07/08/2019 20:25	WG1307870
Styrene	U		0.00326	0.0149	1	07/08/2019 20:25	WG1307870
1,1,1,2-Tetrachloroethane	U		0.000597	0.00299	1	07/08/2019 20:25	WG1307870
1,1,2,2-Tetrachloroethane	U		0.000466	0.00299	1	07/08/2019 20:25	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 06/27/19 11:55

L1114890

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000806	0.00299	1	07/08/2019 20:25	WG1307870
Tetrachloroethene	U		0.000836	0.00299	1	07/08/2019 20:25	WG1307870
Toluene	U		0.00149	0.00597	1	07/08/2019 20:25	WG1307870
1,2,3-Trichlorobenzene	U	<u>JO</u>	0.000746	0.00299	1	07/08/2019 20:25	WG1307870
1,2,4-Trichlorobenzene	U	<u>JO</u>	0.00576	0.0149	1	07/08/2019 20:25	WG1307870
1,1,1-Trichloroethane	U		0.000328	0.00299	1	07/08/2019 20:25	WG1307870
1,1,2-Trichloroethane	U		0.00105	0.00299	1	07/08/2019 20:25	WG1307870
Trichloroethene	U		0.000478	0.00119	1	07/08/2019 20:25	WG1307870
Trichlorofluoromethane	U		0.000597	0.00299	1	07/08/2019 20:25	WG1307870
1,2,3-Trichloropropane	U		0.00609	0.0149	1	07/08/2019 20:25	WG1307870
1,2,4-Trimethylbenzene	U		0.00139	0.00597	1	07/08/2019 20:25	WG1307870
1,2,3-Trimethylbenzene	U		0.00137	0.00597	1	07/08/2019 20:25	WG1307870
Vinyl chloride	U		0.000816	0.00299	1	07/08/2019 20:25	WG1307870
1,3,5-Trimethylbenzene	U		0.00129	0.00597	1	07/08/2019 20:25	WG1307870
Xylenes, Total	U		0.00571	0.00776	1	07/08/2019 20:25	WG1307870
(S) Toluene-d8	107			75.0-131		07/08/2019 20:25	WG1307870
(S) 4-Bromofluorobenzene	98.0			67.0-138		07/08/2019 20:25	WG1307870
(S) 1,2-Dichloroethane-d4	96.4			70.0-130		07/08/2019 20:25	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Acenaphthene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Acenaphthylene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Benzo(a)anthracene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Benzo(a)pyrene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Benzo(b)fluoranthene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Benzo(g,h,i)perylene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Benzo(k)fluoranthene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Chrysene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Dibenz(a,h)anthracene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Fluoranthene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Fluorene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Indeno(1,2,3-cd)pyrene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Naphthalene	U		0.00239	0.0239	1	07/10/2019 17:32	WG1308632
Phenanthrene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
Pyrene	U		0.000716	0.00716	1	07/10/2019 17:32	WG1308632
1-Methylnaphthalene	U		0.00239	0.0239	1	07/10/2019 17:32	WG1308632
2-Methylnaphthalene	U		0.00239	0.0239	1	07/10/2019 17:32	WG1308632
2-Chloronaphthalene	U		0.00239	0.0239	1	07/10/2019 17:32	WG1308632
(S) Nitrobenzene-d5	55.2			14.0-149		07/10/2019 17:32	WG1308632
(S) 2-Fluorobiphenyl	59.3			34.0-125		07/10/2019 17:32	WG1308632
(S) p-Terphenyl-d14	70.4			23.0-120		07/10/2019 17:32	WG1308632



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.1		1	07/10/2019 08:08	WG1308191

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Anthracene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Acenaphthene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Acenaphthylene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Benzo(a)anthracene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Benzo(a)pyrene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Benzo(b)fluoranthene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Benzo(g,h,i)perylene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Benzo(k)fluoranthene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Chrysene	0.0138		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Dibenz(a,h)anthracene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Fluoranthene	0.0225		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Fluorene	0.0851		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Indeno(1,2,3-cd)pyrene	U		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Naphthalene	1.66		0.00213	0.0213	1	07/11/2019 15:32	WG1309196
Phenanthrene	0.147		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
Pyrene	0.0430		0.000638	0.00638	1	07/11/2019 15:32	WG1309196
1-Methylnaphthalene	2.71		0.00213	0.0213	1	07/11/2019 15:32	WG1309196
2-Methylnaphthalene	0.662		0.00213	0.0213	1	07/11/2019 15:32	WG1309196
2-Chloronaphthalene	U		0.00213	0.0213	1	07/11/2019 15:32	WG1309196
(S) Nitrobenzene-d5	885	<u>J1</u>		14.0-149		07/11/2019 15:32	WG1309196
(S) 2-Fluorobiphenyl	79.6			34.0-125		07/11/2019 15:32	WG1309196
(S) p-Terphenyl-d14	82.3			23.0-120		07/11/2019 15:32	WG1309196

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	82.2		1	07/10/2019 08:08	WG1308191

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

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Acetone	0.0196	J	0.0167	0.0304	1	07/08/2019 20:47	WG1307870
Acrylonitrile	U		0.00231	0.0152	1	07/08/2019 20:47	WG1307870
Benzene	U		0.000487	0.00122	1	07/08/2019 20:47	WG1307870
Bromobenzene	U		0.00128	0.0152	1	07/08/2019 20:47	WG1307870
Bromodichloromethane	U		0.000959	0.00304	1	07/08/2019 20:47	WG1307870
Bromoform	U		0.00728	0.0304	1	07/08/2019 20:47	WG1307870
Bromomethane	U		0.00450	0.0152	1	07/08/2019 20:47	WG1307870
n-Butylbenzene	U		0.00467	0.0152	1	07/08/2019 20:47	WG1307870
sec-Butylbenzene	U		0.00308	0.0152	1	07/08/2019 20:47	WG1307870
tert-Butylbenzene	U		0.00189	0.00608	1	07/08/2019 20:47	WG1307870
Carbon tetrachloride	U		0.00131	0.00608	1	07/08/2019 20:47	WG1307870
Chlorobenzene	U		0.000697	0.00304	1	07/08/2019 20:47	WG1307870
Chlorodibromomethane	U		0.000548	0.00304	1	07/08/2019 20:47	WG1307870
Chloroethane	U		0.00131	0.00608	1	07/08/2019 20:47	WG1307870
Chloroform	U		0.000505	0.00304	1	07/08/2019 20:47	WG1307870
Chloromethane	U		0.00169	0.0152	1	07/08/2019 20:47	WG1307870
2-Chlorotoluene	U		0.00112	0.00304	1	07/08/2019 20:47	WG1307870
4-Chlorotoluene	U		0.00137	0.00608	1	07/08/2019 20:47	WG1307870
1,2-Dibromo-3-Chloropropane	U		0.00621	0.0304	1	07/08/2019 20:47	WG1307870
1,2-Dibromoethane	U		0.000639	0.00304	1	07/08/2019 20:47	WG1307870
Dibromomethane	U		0.00122	0.00608	1	07/08/2019 20:47	WG1307870
1,2-Dichlorobenzene	U		0.00176	0.00608	1	07/08/2019 20:47	WG1307870
1,3-Dichlorobenzene	U		0.00207	0.00608	1	07/08/2019 20:47	WG1307870
1,4-Dichlorobenzene	U		0.00240	0.00608	1	07/08/2019 20:47	WG1307870
Dichlorodifluoromethane	U		0.000995	0.00304	1	07/08/2019 20:47	WG1307870
1,1-Dichloroethane	U		0.000700	0.00304	1	07/08/2019 20:47	WG1307870
1,2-Dichloroethane	U		0.000578	0.00304	1	07/08/2019 20:47	WG1307870
1,1-Dichloroethene	U		0.000608	0.00304	1	07/08/2019 20:47	WG1307870
cis-1,2-Dichloroethene	U		0.000840	0.00304	1	07/08/2019 20:47	WG1307870
trans-1,2-Dichloroethene	U		0.00174	0.00608	1	07/08/2019 20:47	WG1307870
1,2-Dichloropropane	U		0.00155	0.00608	1	07/08/2019 20:47	WG1307870
1,1-Dichloropropene	U		0.000852	0.00304	1	07/08/2019 20:47	WG1307870
1,3-Dichloropropane	U		0.00213	0.00608	1	07/08/2019 20:47	WG1307870
cis-1,3-Dichloropropene	U		0.000825	0.00304	1	07/08/2019 20:47	WG1307870
trans-1,3-Dichloropropene	U		0.00186	0.00608	1	07/08/2019 20:47	WG1307870
2,2-Dichloropropane	U		0.000965	0.00304	1	07/08/2019 20:47	WG1307870
Di-isopropyl ether	U		0.000426	0.00122	1	07/08/2019 20:47	WG1307870
Ethylbenzene	U		0.000645	0.00304	1	07/08/2019 20:47	WG1307870
Hexachloro-1,3-butadiene	U		0.0155	0.0304	1	07/08/2019 20:47	WG1307870
Isopropylbenzene	U		0.00105	0.00304	1	07/08/2019 20:47	WG1307870
p-Isopropyltoluene	U		0.00284	0.00608	1	07/08/2019 20:47	WG1307870
2-Butanone (MEK)	0.0380	B	0.0152	0.0304	1	07/08/2019 20:47	WG1307870
Methylene Chloride	U		0.00808	0.0304	1	07/08/2019 20:47	WG1307870
4-Methyl-2-pentanone (MIBK)	U		0.0122	0.0304	1	07/08/2019 20:47	WG1307870
Methyl tert-butyl ether	U		0.000359	0.00122	1	07/08/2019 20:47	WG1307870
Naphthalene	U	JO	0.00380	0.0152	1	07/08/2019 20:47	WG1307870
n-Propylbenzene	U		0.00144	0.00608	1	07/08/2019 20:47	WG1307870
Styrene	U		0.00332	0.0152	1	07/08/2019 20:47	WG1307870
1,1,1,2-Tetrachloroethane	U		0.000608	0.00304	1	07/08/2019 20:47	WG1307870
1,1,2,2-Tetrachloroethane	U		0.000475	0.00304	1	07/08/2019 20:47	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc



Collected date/time: 06/28/19 10:40

L1114890

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

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
1,1,2-Trichlorotrifluoroethane	U		0.000821	0.00304	1	07/08/2019 20:47	WG1307870
Tetrachloroethene	U		0.000852	0.00304	1	07/08/2019 20:47	WG1307870
Toluene	U		0.00152	0.00608	1	07/08/2019 20:47	WG1307870
1,2,3-Trichlorobenzene	U	JO	0.000760	0.00304	1	07/08/2019 20:47	WG1307870
1,2,4-Trichlorobenzene	U	JO	0.00586	0.0152	1	07/08/2019 20:47	WG1307870
1,1,1-Trichloroethane	U		0.000335	0.00304	1	07/08/2019 20:47	WG1307870
1,1,2-Trichloroethane	U		0.00107	0.00304	1	07/08/2019 20:47	WG1307870
Trichloroethene	U		0.000487	0.00122	1	07/08/2019 20:47	WG1307870
Trichlorofluoromethane	U		0.000608	0.00304	1	07/08/2019 20:47	WG1307870
1,2,3-Trichloropropane	U		0.00621	0.0152	1	07/08/2019 20:47	WG1307870
1,2,4-Trimethylbenzene	U		0.00141	0.00608	1	07/08/2019 20:47	WG1307870
1,2,3-Trimethylbenzene	U		0.00140	0.00608	1	07/08/2019 20:47	WG1307870
Vinyl chloride	U		0.000831	0.00304	1	07/08/2019 20:47	WG1307870
1,3,5-Trimethylbenzene	U		0.00131	0.00608	1	07/08/2019 20:47	WG1307870
Xylenes, Total	U		0.00582	0.00791	1	07/08/2019 20:47	WG1307870
(S) Toluene-d8	106			75.0-131		07/08/2019 20:47	WG1307870
(S) 4-Bromofluorobenzene	96.3			67.0-138		07/08/2019 20:47	WG1307870
(S) 1,2-Dichloroethane-d4	96.0			70.0-130		07/08/2019 20:47	WG1307870

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270D-SIM

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Anthracene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Acenaphthene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Acenaphthylene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Benzo(a)anthracene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Benzo(a)pyrene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Benzo(b)fluoranthene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Benzo(g,h,i)perylene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Benzo(k)fluoranthene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Chrysene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Dibenz(a,h)anthracene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Fluoranthene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Fluorene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Indeno(1,2,3-cd)pyrene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Naphthalene	U		0.00243	0.0243	1	07/11/2019 15:54	WG1309196
Phenanthrene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
Pyrene	U		0.000730	0.00730	1	07/11/2019 15:54	WG1309196
1-Methylnaphthalene	U		0.00243	0.0243	1	07/11/2019 15:54	WG1309196
2-Methylnaphthalene	0.00638	J	0.00243	0.0243	1	07/11/2019 15:54	WG1309196
2-Chloronaphthalene	U		0.00243	0.0243	1	07/11/2019 15:54	WG1309196
(S) Nitrobenzene-d5	67.4			14.0-149		07/11/2019 15:54	WG1309196
(S) 2-Fluorobiphenyl	68.4			34.0-125		07/11/2019 15:54	WG1309196
(S) p-Terphenyl-d14	67.2			23.0-120		07/11/2019 15:54	WG1309196



Method Blank (MB)

(MB) R3429184-1 07/09/19 13:27

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00200			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1114848-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1114848-01 07/09/19 13:27 • (DUP) R3429184-3 07/09/19 13:27

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	90.7	90.3	1	0.505		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3429184-2 07/09/19 13:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3429354-1 07/10/19 08:18

Analyte	MB Result %	MB Qualifier	MB MDL %	MB RDL %
Total Solids	0.00100			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1114890-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1114890-10 07/10/19 08:18 • (DUP) R3429354-3 07/10/19 08:18

Analyte	Original Result %	DUP Result %	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits
Total Solids	96.5	96.2	1	0.269		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3429354-2 07/10/19 08:18

Analyte	Spike Amount %	LCS Result %	LCS Rec. %	Rec. Limits %	LCS Qualifier
Total Solids	50.0	50.0	100	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3429347-1 07/10/19 08:08

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

L1114890-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1114890-13 07/10/19 08:08 • (DUP) R3429347-3 07/10/19 08:08

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	83.7	84.4	1	0.757		10

⁷ Gl

⁸ Al

Laboratory Control Sample (LCS)

(LCS) R3429347-2 07/10/19 08:08

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁹ Sc



Method Blank (MB)

(MB) R3428960-2 07/08/19 12:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Acetone	U		0.0137	0.0250
Acrylonitrile	U		0.00190	0.0125
Benzene	U		0.000400	0.00100
Bromobenzene	U		0.00105	0.0125
Bromodichloromethane	U		0.000788	0.00250
Bromoform	U		0.00598	0.0250
Bromomethane	U		0.00370	0.0125
n-Butylbenzene	U		0.00384	0.0125
sec-Butylbenzene	U		0.00253	0.0125
tert-Butylbenzene	U		0.00155	0.00500
Carbon tetrachloride	U		0.00108	0.00500
Chlorobenzene	U		0.000573	0.00250
Chlorodibromomethane	U		0.000450	0.00250
Chloroethane	U		0.00108	0.00500
Chloroform	U		0.000415	0.00250
Chloromethane	U		0.00139	0.0125
2-Chlorotoluene	U		0.000920	0.00250
4-Chlorotoluene	U		0.00113	0.00500
1,2-Dibromo-3-Chloropropane	U		0.00510	0.0250
1,2-Dibromoethane	U		0.000525	0.00250
Dibromomethane	U		0.00100	0.00500
1,2-Dichlorobenzene	U		0.00145	0.00500
1,3-Dichlorobenzene	U		0.00170	0.00500
1,4-Dichlorobenzene	U		0.00197	0.00500
Dichlorodifluoromethane	U		0.000818	0.00250
1,1-Dichloroethane	U		0.000575	0.00250
1,2-Dichloroethane	U		0.000475	0.00250
1,1-Dichloroethene	U		0.000500	0.00250
cis-1,2-Dichloroethene	U		0.000690	0.00250
trans-1,2-Dichloroethene	U		0.00143	0.00500
1,2-Dichloropropane	U		0.00127	0.00500
1,1-Dichloropropene	U		0.000700	0.00250
1,3-Dichloropropane	U		0.00175	0.00500
cis-1,3-Dichloropropene	U		0.000678	0.00250
trans-1,3-Dichloropropene	U		0.00153	0.00500
2,2-Dichloropropane	U		0.000793	0.00250
Di-isopropyl ether	U		0.000350	0.00100
Ethylbenzene	U		0.000530	0.00250
Hexachloro-1,3-butadiene	U		0.0127	0.0250
Isopropylbenzene	U		0.000863	0.00250

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3428960-2 07/08/19 12:25

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
p-Isopropyltoluene	U		0.00233	0.00500
2-Butanone (MEK)	0.0214	J	0.0125	0.0250
Methylene Chloride	U		0.00664	0.0250
4-Methyl-2-pentanone (MIBK)	U		0.0100	0.0250
Methyl tert-butyl ether	U		0.000295	0.00100
Naphthalene	U		0.00312	0.0125
n-Propylbenzene	U		0.00118	0.00500
Styrene	U		0.00273	0.0125
1,1,1,2-Tetrachloroethane	U		0.000500	0.00250
1,1,2,2-Tetrachloroethane	U		0.000390	0.00250
Tetrachloroethene	U		0.000700	0.00250
Toluene	U		0.00125	0.00500
1,1,2-Trichlorotrifluoroethane	U		0.000675	0.00250
1,2,3-Trichlorobenzene	U		0.000625	0.00250
1,2,4-Trichlorobenzene	U		0.00482	0.0125
1,1,1-Trichloroethane	U		0.000275	0.00250
1,1,2-Trichloroethane	U		0.000883	0.00250
Trichloroethene	U		0.000400	0.00100
Trichlorofluoromethane	U		0.000500	0.00250
1,2,3-Trichloropropane	U		0.00510	0.0125
1,2,3-Trimethylbenzene	U		0.00115	0.00500
1,2,4-Trimethylbenzene	U		0.00116	0.00500
1,3,5-Trimethylbenzene	U		0.00108	0.00500
Vinyl chloride	U		0.000683	0.00250
Xylenes, Total	U		0.00478	0.00650
(S) Toluene-d8	108			75.0-131
(S) 4-Bromofluorobenzene	99.4			67.0-138
(S) 1,2-Dichloroethane-d4	98.2			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3428960-1 07/08/19 11:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.625	0.608	97.2	10.0-160	
Acrylonitrile	0.625	0.673	108	45.0-153	
Benzene	0.125	0.131	105	70.0-123	
Bromobenzene	0.125	0.131	105	73.0-121	
Bromodichloromethane	0.125	0.134	107	73.0-121	



Laboratory Control Sample (LCS)

(LCS) R3428960-1 07/08/19 11:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Bromoform	0.125	0.134	107	64.0-132	
Bromomethane	0.125	0.138	111	56.0-147	
n-Butylbenzene	0.125	0.120	96.1	68.0-135	
sec-Butylbenzene	0.125	0.120	96.2	74.0-130	
tert-Butylbenzene	0.125	0.125	100	75.0-127	
Carbon tetrachloride	0.125	0.133	106	66.0-128	
Chlorobenzene	0.125	0.132	106	76.0-128	
Chlorodibromomethane	0.125	0.136	109	74.0-127	
Chloroethane	0.125	0.140	112	61.0-134	
Chloroform	0.125	0.130	104	72.0-123	
Chloromethane	0.125	0.119	95.4	51.0-138	
2-Chlorotoluene	0.125	0.127	102	75.0-124	
4-Chlorotoluene	0.125	0.134	107	75.0-124	
1,2-Dibromo-3-Chloropropane	0.125	0.102	81.6	59.0-130	
1,2-Dibromoethane	0.125	0.136	109	74.0-128	
Dibromomethane	0.125	0.136	109	75.0-122	
1,2-Dichlorobenzene	0.125	0.126	101	76.0-124	
1,3-Dichlorobenzene	0.125	0.129	103	76.0-125	
1,4-Dichlorobenzene	0.125	0.124	99.0	77.0-121	
Dichlorodifluoromethane	0.125	0.189	151	43.0-156	
1,1-Dichloroethane	0.125	0.130	104	70.0-127	
1,2-Dichloroethane	0.125	0.126	101	65.0-131	
1,1-Dichloroethene	0.125	0.134	107	65.0-131	
cis-1,2-Dichloroethene	0.125	0.124	99.0	73.0-125	
trans-1,2-Dichloroethene	0.125	0.129	103	71.0-125	
1,2-Dichloropropane	0.125	0.137	110	74.0-125	
1,1-Dichloropropene	0.125	0.136	109	73.0-125	
1,3-Dichloropropane	0.125	0.138	110	80.0-125	
cis-1,3-Dichloropropene	0.125	0.135	108	76.0-127	
trans-1,3-Dichloropropene	0.125	0.137	110	73.0-127	
2,2-Dichloropropane	0.125	0.140	112	59.0-135	
Di-isopropyl ether	0.125	0.117	93.5	60.0-136	
Ethylbenzene	0.125	0.130	104	74.0-126	
Hexachloro-1,3-butadiene	0.125	0.114	91.0	57.0-150	
Isopropylbenzene	0.125	0.130	104	72.0-127	
p-Isopropyltoluene	0.125	0.123	98.3	72.0-133	
2-Butanone (MEK)	0.625	0.700	112	30.0-160	
Methylene Chloride	0.125	0.126	101	68.0-123	
4-Methyl-2-pentanone (MIBK)	0.625	0.613	98.1	56.0-143	
Methyl tert-butyl ether	0.125	0.126	101	66.0-132	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Laboratory Control Sample (LCS)

(LCS) R3428960-1 07/08/19 11:20

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Naphthalene	0.125	0.0940	75.2	59.0-130	
n-Propylbenzene	0.125	0.127	102	74.0-126	
Styrene	0.125	0.135	108	72.0-127	
1,1,1,2-Tetrachloroethane	0.125	0.132	106	74.0-129	
1,1,2,2-Tetrachloroethane	0.125	0.136	109	68.0-128	
Tetrachloroethene	0.125	0.139	111	70.0-136	
Toluene	0.125	0.132	106	75.0-121	
1,1,2-Trichlorotrifluoroethane	0.125	0.126	101	61.0-139	
1,2,3-Trichlorobenzene	0.125	0.0919	73.5	59.0-139	
1,2,4-Trichlorobenzene	0.125	0.107	85.3	62.0-137	
1,1,1-Trichloroethane	0.125	0.133	107	69.0-126	
1,1,2-Trichloroethane	0.125	0.138	111	78.0-123	
Trichloroethene	0.125	0.124	98.9	76.0-126	
Trichlorofluoromethane	0.125	0.135	108	61.0-142	
1,2,3-Trichloropropane	0.125	0.146	117	67.0-129	
1,2,3-Trimethylbenzene	0.125	0.155	124	74.0-124	
1,2,4-Trimethylbenzene	0.125	0.128	103	70.0-126	
1,3,5-Trimethylbenzene	0.125	0.127	101	73.0-127	
Vinyl chloride	0.125	0.140	112	63.0-134	
Xylenes, Total	0.375	0.390	104	72.0-127	
(S) Toluene-d8			104	75.0-131	
(S) 4-Bromofluorobenzene			96.5	67.0-138	
(S) 1,2-Dichloroethane-d4			104	70.0-130	

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc



Method Blank (MB)

(MB) R3429834-1 07/11/19 10:20

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
PCB 1016	U		0.00350	0.0170
PCB 1221	U		0.00537	0.0170
PCB 1232	U		0.00417	0.0170
PCB 1242	U		0.00318	0.0170
PCB 1248	U		0.00315	0.0170
PCB 1254	U		0.00472	0.0170
PCB 1260	U		0.00494	0.0170
Total PCBs	U		0.000100	0.000500
(S) Decachlorobiphenyl	44.1			10.0-135
(S) Tetrachloro-m-xylene	42.9			10.0-139

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3429834-2 07/11/19 10:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
PCB 1260	0.167	0.0808	48.4	37.0-145	
PCB 1016	0.167	0.0710	42.5	36.0-141	
(S) Decachlorobiphenyl			70.9	10.0-135	
(S) Tetrachloro-m-xylene			68.2	10.0-139	

L1114885-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1114885-01 07/11/19 21:57 • (MS) R3429834-3 07/11/19 22:11

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
PCB 1260	0.167	ND	0.120	71.9	1	10.0-160	
PCB 1016	0.167	ND	0.107	64.1	1	10.0-160	
(S) Decachlorobiphenyl				87.1		10.0-135	
(S) Tetrachloro-m-xylene				84.2		10.0-139	



Method Blank (MB)

(MB) R3429535-2 07/10/19 18:52

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	91.8			14.0-149
(S) 2-Fluorobiphenyl	94.4			34.0-125
(S) p-Terphenyl-d14	108			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3429535-1 07/10/19 18:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0703	87.9	50.0-126	
Acenaphthene	0.0800	0.0618	77.3	50.0-120	
Acenaphthylene	0.0800	0.0641	80.1	50.0-120	
Benzo(a)anthracene	0.0800	0.0760	95.0	45.0-120	
Benzo(a)pyrene	0.0800	0.0648	81.0	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0725	90.6	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0674	84.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0699	87.4	49.0-125	
Chrysene	0.0800	0.0729	91.1	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0697	87.1	47.0-125	
Fluoranthene	0.0800	0.0771	96.4	49.0-129	



Laboratory Control Sample (LCS)

(LCS) R3429535-1 07/10/19 18:31

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0678	84.8	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0678	84.8	46.0-125	
Naphthalene	0.0800	0.0553	69.1	50.0-120	
Phenanthrene	0.0800	0.0674	84.3	47.0-120	
Pyrene	0.0800	0.0774	96.8	43.0-123	
1-Methylnaphthalene	0.0800	0.0568	71.0	51.0-121	
2-Methylnaphthalene	0.0800	0.0592	74.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0620	77.5	50.0-120	
<i>(S) Nitrobenzene-d5</i>			113	14.0-149	
<i>(S) 2-Fluorobiphenyl</i>			107	34.0-125	
<i>(S) p-Terphenyl-d14</i>			110	23.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1114322-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1114322-30 07/10/19 23:27 • (MS) R3429535-3 07/10/19 23:48 • (MSD) R3429535-4 07/11/19 00:09

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.116	ND	0.0917	0.351	78.8	301	1	10.0-145		<u>J3 J5 V3</u>	117	30
Benzo(a)anthracene	0.116	ND	0.0980	0.0948	84.1	81.4	1	10.0-139			3.32	30
Benzo(a)pyrene	0.116	ND	0.0875	0.0834	72.4	68.9	1	10.0-141			4.77	31
Benzo(b)fluoranthene	0.116	0.0550	0.0890	0.0875	29.1	27.9	1	10.0-140			1.65	36
Benzo(g,h,i)perylene	0.116	ND	0.0770	0.0789	66.1	67.8	1	10.0-140			2.43	33
Benzo(k)fluoranthene	0.116	ND	0.0839	0.0833	72.0	71.5	1	10.0-137			0.697	31
Chrysene	0.116	ND	0.0964	0.109	75.8	86.3	1	10.0-145			11.9	30
Dibenz(a,h)anthracene	0.116	ND	0.0756	0.0743	64.9	63.8	1	10.0-132			1.75	31
Fluoranthene	0.116	0.0293	0.0628	0.419	28.8	335	1	10.0-153		<u>J3 J5 V3</u>	148	33
Indeno(1,2,3-cd)pyrene	0.116	ND	0.0747	0.0738	64.1	63.4	1	10.0-137			1.18	32
Naphthalene	0.116	ND	0.0794	0.0808	64.7	65.9	1	10.0-135			1.82	27
Phenanthrene	0.116	ND	0.0936	0.543	80.4	466	1	10.0-144		<u>J3 J5 V3</u>	141	31
Pyrene	0.116	0.210	0.326	1.85	100	1410	1	10.0-148		<u>J3 J5</u>	140	35
1-Methylnaphthalene	0.116	ND	0.132	0.280	113	240	1	10.0-142		<u>J3 J5</u>	72.0	28
2-Methylnaphthalene	0.116	ND	0.0901	0.0901	77.4	77.4	1	10.0-137			0.000	28
<i>(S) Nitrobenzene-d5</i>					155	141		14.0-149	<u>J1</u>			
<i>(S) 2-Fluorobiphenyl</i>					55.0	26.0		34.0-125		<u>J2</u>		
<i>(S) p-Terphenyl-d14</i>					111	188		23.0-120		<u>J1</u>		



Method Blank (MB)

(MB) R3429352-2 07/10/19 13:16

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	89.9			14.0-149
(S) 2-Fluorobiphenyl	98.2			34.0-125
(S) p-Terphenyl-d14	100			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3429352-1 07/10/19 12:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0680	85.0	50.0-126	
Acenaphthene	0.0800	0.0636	79.5	50.0-120	
Acenaphthylene	0.0800	0.0679	84.9	50.0-120	
Benzo(a)anthracene	0.0800	0.0669	83.6	45.0-120	
Benzo(a)pyrene	0.0800	0.0630	78.8	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0708	88.5	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0692	86.5	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0701	87.6	49.0-125	
Chrysene	0.0800	0.0655	81.9	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0702	87.8	47.0-125	
Fluoranthene	0.0800	0.0708	88.5	49.0-129	



Laboratory Control Sample (LCS)

(LCS) R3429352-1 07/10/19 12:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Fluorene	0.0800	0.0676	84.5	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0709	88.6	46.0-125	
Naphthalene	0.0800	0.0563	70.4	50.0-120	
Phenanthrene	0.0800	0.0671	83.9	47.0-120	
Pyrene	0.0800	0.0673	84.1	43.0-123	
1-Methylnaphthalene	0.0800	0.0628	78.5	51.0-121	
2-Methylnaphthalene	0.0800	0.0604	75.5	50.0-120	
2-Chloronaphthalene	0.0800	0.0630	78.8	50.0-120	
<i>(S) Nitrobenzene-d5</i>			87.5	14.0-149	
<i>(S) 2-Fluorobiphenyl</i>			90.5	34.0-125	
<i>(S) p-Terphenyl-d14</i>			87.9	23.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1114890-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1114890-09 07/10/19 15:45 • (MS) R3429352-3 07/10/19 16:07 • (MSD) R3429352-4 07/10/19 16:28

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Anthracene	0.0949	U	0.0650	0.0624	68.5	65.8	1	10.0-145			4.10	30
Acenaphthene	0.0949	U	0.0565	0.0554	59.5	58.4	1	14.0-127			1.91	27
Acenaphthylene	0.0949	U	0.0601	0.0592	63.4	62.4	1	21.0-124			1.59	25
Benzo(a)anthracene	0.0949	U	0.0635	0.0601	66.9	63.4	1	10.0-139			5.37	30
Benzo(a)pyrene	0.0949	U	0.0656	0.0627	69.1	66.1	1	10.0-141			4.44	31
Benzo(b)fluoranthene	0.0949	U	0.0632	0.0613	66.6	64.6	1	10.0-140			3.05	36
Benzo(g,h,i)perylene	0.0949	U	0.0497	0.0400	52.4	42.1	1	10.0-140			21.7	33
Benzo(k)fluoranthene	0.0949	U	0.0667	0.0654	70.3	68.9	1	10.0-137			1.98	31
Chrysene	0.0949	U	0.0619	0.0597	65.3	62.9	1	10.0-145			3.71	30
Dibenz(a,h)anthracene	0.0949	U	0.0556	0.0464	58.6	48.9	1	10.0-132			18.1	31
Fluoranthene	0.0949	U	0.0645	0.0626	68.0	66.0	1	10.0-153			2.99	33
Fluorene	0.0949	U	0.0604	0.0579	63.6	61.0	1	11.0-130			4.21	29
Indeno(1,2,3-cd)pyrene	0.0949	U	0.0541	0.0442	57.0	46.6	1	10.0-137			20.0	32
Naphthalene	0.0949	U	0.0496	0.0521	52.3	54.9	1	10.0-135			4.90	27
Phenanthrene	0.0949	U	0.0612	0.0593	64.5	62.5	1	10.0-144			3.15	31
Pyrene	0.0949	U	0.0624	0.0599	65.8	63.1	1	10.0-148			4.07	35
1-Methylnaphthalene	0.0949	U	0.0557	0.0566	58.8	59.6	1	10.0-142			1.48	28
2-Methylnaphthalene	0.0949	U	0.0540	0.0548	56.9	57.8	1	10.0-137			1.53	28
2-Chloronaphthalene	0.0949	U	0.0553	0.0555	58.3	58.5	1	29.0-120			0.428	24
<i>(S) Nitrobenzene-d5</i>					58.8	63.1		14.0-149				
<i>(S) 2-Fluorobiphenyl</i>					60.1	62.0		34.0-125				
<i>(S) p-Terphenyl-d14</i>					68.9	66.2		23.0-120				



Method Blank (MB)

(MB) R3429748-2 07/11/19 11:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Anthracene	U		0.00600	0.00600
Acenaphthene	U		0.00600	0.00600
Acenaphthylene	U		0.00600	0.00600
Benzo(a)anthracene	U		0.00600	0.00600
Benzo(a)pyrene	U		0.00600	0.00600
Benzo(b)fluoranthene	U		0.00600	0.00600
Benzo(g,h,i)perylene	U		0.00600	0.00600
Benzo(k)fluoranthene	U		0.00600	0.00600
Chrysene	U		0.00600	0.00600
Dibenz(a,h)anthracene	U		0.00600	0.00600
Fluoranthene	U		0.00600	0.00600
Fluorene	U		0.00600	0.00600
Indeno(1,2,3-cd)pyrene	U		0.00600	0.00600
Naphthalene	U		0.00200	0.0200
Phenanthrene	U		0.00600	0.00600
Pyrene	U		0.00600	0.00600
1-Methylnaphthalene	U		0.00200	0.0200
2-Methylnaphthalene	U		0.00200	0.0200
2-Chloronaphthalene	U		0.00200	0.0200
(S) Nitrobenzene-d5	62.9			14.0-149
(S) 2-Fluorobiphenyl	69.4			34.0-125
(S) p-Terphenyl-d14	72.2			23.0-120

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Laboratory Control Sample (LCS)

(LCS) R3429748-1 07/11/19 11:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Anthracene	0.0800	0.0618	77.3	50.0-126	
Acenaphthene	0.0800	0.0599	74.9	50.0-120	
Acenaphthylene	0.0800	0.0658	82.3	50.0-120	
Benzo(a)anthracene	0.0800	0.0599	74.9	45.0-120	
Benzo(a)pyrene	0.0800	0.0601	75.1	42.0-120	
Benzo(b)fluoranthene	0.0800	0.0631	78.9	42.0-121	
Benzo(g,h,i)perylene	0.0800	0.0626	78.3	45.0-125	
Benzo(k)fluoranthene	0.0800	0.0605	75.6	49.0-125	
Chrysene	0.0800	0.0579	72.4	49.0-122	
Dibenz(a,h)anthracene	0.0800	0.0630	78.8	47.0-125	
Fluoranthene	0.0800	0.0618	77.3	49.0-129	



Laboratory Control Sample (LCS)

(LCS) R3429748-1 07/11/19 11:15

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluorene	0.0800	0.0616	77.0	49.0-120	
Indeno(1,2,3-cd)pyrene	0.0800	0.0642	80.3	46.0-125	
Naphthalene	0.0800	0.0562	70.3	50.0-120	
Phenanthrene	0.0800	0.0585	73.1	47.0-120	
Pyrene	0.0800	0.0596	74.5	43.0-123	
1-Methylnaphthalene	0.0800	0.0694	86.8	51.0-121	
2-Methylnaphthalene	0.0800	0.0664	83.0	50.0-120	
2-Chloronaphthalene	0.0800	0.0601	75.1	50.0-120	
(S) Nitrobenzene-d5			75.9	14.0-149	
(S) 2-Fluorobiphenyl			77.7	34.0-125	
(S) p-Terphenyl-d14			79.0	23.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1114955-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1114955-03 07/11/19 16:15 • (MS) R3429748-3 07/11/19 16:37 • (MSD) R3429748-4 07/11/19 16:58

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Anthracene	0.0800	ND	0.0651	0.0767	81.4	95.9	1	10.0-145			16.4	30
Acenaphthene	0.0800	ND	0.0545	0.0597	68.1	74.6	1	14.0-127			9.11	27
Acenaphthylene	0.0800	ND	0.0583	0.0640	72.9	80.0	1	21.0-124			9.32	25
Benzo(a)anthracene	0.0800	ND	0.0592	0.0621	74.0	77.6	1	10.0-139			4.78	30
Benzo(a)pyrene	0.0800	ND	0.0585	0.0628	73.1	78.5	1	10.0-141			7.09	31
Benzo(b)fluoranthene	0.0800	ND	0.0611	0.0642	76.4	80.3	1	10.0-140			4.95	36
Benzo(g,h,i)perylene	0.0800	ND	0.0587	0.0604	73.4	75.5	1	10.0-140			2.85	33
Benzo(k)fluoranthene	0.0800	ND	0.0546	0.0591	68.3	73.9	1	10.0-137			7.92	31
Chrysene	0.0800	ND	0.0625	0.0707	78.1	88.4	1	10.0-145			12.3	30
Dibenz(a,h)anthracene	0.0800	ND	0.0568	0.0578	71.0	72.3	1	10.0-132			1.75	31
Fluoranthene	0.0800	ND	0.0665	0.0686	83.1	85.8	1	10.0-153			3.11	33
Fluorene	0.0800	ND	0.0595	0.0684	74.4	85.5	1	11.0-130			13.9	29
Indeno(1,2,3-cd)pyrene	0.0800	ND	0.0572	0.0591	71.5	73.9	1	10.0-137			3.27	32
Naphthalene	0.0800	ND	0.0519	0.0574	64.9	71.8	1	10.0-135			10.1	27
Phenanthrene	0.0800	ND	0.0732	0.0852	91.5	107	1	10.0-144			15.2	31
Pyrene	0.0800	ND	0.0686	0.0834	85.8	104	1	10.0-148			19.5	35
1-Methylnaphthalene	0.0800	ND	0.0574	0.0634	71.8	79.3	1	10.0-142			9.93	28
2-Methylnaphthalene	0.0800	ND	0.0560	0.0616	70.0	77.0	1	10.0-137			9.52	28
2-Chloronaphthalene	0.0800	ND	0.0536	0.0584	67.0	73.0	1	29.0-120			8.57	24
(S) Nitrobenzene-d5					72.1	76.4		14.0-149				
(S) 2-Fluorobiphenyl					74.9	78.5		34.0-125				
(S) p-Terphenyl-d14					80.2	84.3		23.0-120				



Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Ai
- 9 Sc

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J0	J0: The identification of the analyte is acceptable, but the reported concentration is an estimate. The calibration method criteria.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J7	Surrogate recovery cannot be used for control limit evaluation due to dilution.
V3	The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.



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* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey-NELAP	TN002
California	2932	New Mexico ¹	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	90010	South Carolina	84004
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana ¹	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas ⁵	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

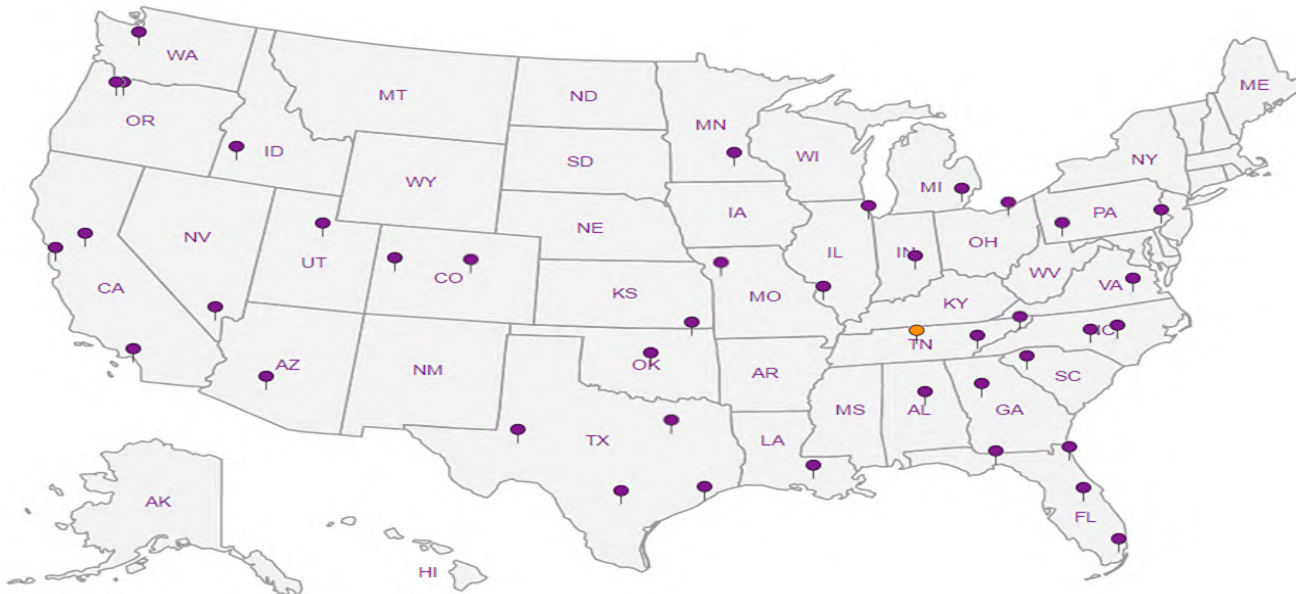
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA-Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

**Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form**

Client:

Cooler Received/Opened On: 7/2/19

ATCTAZ

L1114840

SDG:

Received By: Jordan Harris

3.82


Signature:



Receipt Check List

	NP	Yes	No
COC Seal Present / Intact?		<input checked="" type="checkbox"/>	
COC Signed / Accurate?		<input checked="" type="checkbox"/>	
Bottles arrive intact?		<input checked="" type="checkbox"/>	
Correct bottles used?		<input checked="" type="checkbox"/>	
Sufficient volume sent?		<input checked="" type="checkbox"/>	
If Applicable VOA Zero headspace?		<input checked="" type="checkbox"/>	
Preservation Correct / Checked?			

**Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form**

Client:	ATCTAZ	L1114890
Cooler Received/Opened On: 7/2/19	3.8°C	
Received By: Jordan Harris		
Signature: 		

SDG:

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		/	
COC Signed / Accurate?		/	
Bottles arrive intact?		/	
Correct bottles used?		/	
Sufficient volume sent?		/	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?			