HWA GeoSciences Inc.

Geotechnical Engineering • Hydrogeology • Geoenvironmental Services • Inspection and Testing

May 12, 2017
HWA Project No. 2007-098-2045

Washington State Department of Ecology
3190 160th Ave SE
Bellevue, WA 98008

Attention: Sunny Becker

Subject: **Further Delineation of Site Boundary for Ultra and Riverside HVOC Sites**
RECONNAISSANCE GROUND WATER SAMPLING LETTER REPORT
Bothell, WA

Dear Ms. Becker:

This letter report details the reconnaissance ground water sampling activities at and near the Ultra Custom Care Cleaners (Ultra) and Bothell Riverside (Riverside) halogenated volatile organic compound (HVOC) Sites located in Bothell, Washington. Both sites are under Agreed Orders between the City and the Washington State Department of Ecology (Ecology).

The work was completed in accordance with the HWA *Further Delineation of Site Boundary for Ultra and Riverside HVOC Sites Reconnaissance Ground Water Sampling Work Plan* dated January 30, 2017 and approved by Ecology on March 1, 2017.

Several phases of shallow and deep ground water sampling, via geoprobes, temporary and permanent wells, have occurred at both sites. The recent reconnaissance ground water samples were collected from areas between the known extents of the Ultra and Riverside HVOC plumes to address data gaps regarding the extent of tetrachloroethene (PCE) in the deeper portions of the aquifer. The objectives of this study were to:

- Further delineate the Ultra site boundary, especially the southern, eastern and western end of the plume;
- Determine if there is any potential upgradient source of the Riverside HVOC site;
- Determine if there are HVOCs at depths of 25’ bgs or deeper

Based on background information and analytical data from previous studies conducted at the Ultra and Riverside Sites, Contaminants of Concern (COC) at both Sites are halogenated volatile organic compounds (HVOCs) consisting of PCE and its degradation products trichloroethene (TCE), (cis) 1,2-dichlorethene (DCE), and vinyl chloride, (VC).

Reconnaissance ground water sampling field activities were conducted from March 20 to April 5, 2017. Ten borings were advanced to depths

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ranging between 40 and 45.5 feet below ground surface (bgs) utilizing a truck mounted hollow stem auger drill rig. Boring locations are shown on Figures 1 through 4. During the drilling activities, soil samples were collected at 2.5-foot intervals to the completion depth of each boring. HWA conducted field screening of soil from the borings for the presence of volatile organic vapors using a Mini-Rae PGM 75 Photoionization Detector (PID) to assist with determining if the soils had been impacted by HVOCs. Soils encountered during drilling activities generally consisted mainly fine grained sands with varying amounts of silt or silty fine grained sands. In general, the area investigated is comprised predominantly of relatively low permeability alluvial deposits. Ground water velocities are likely slow, and vertical migration of contaminants is likely hindered by numerous, although discontinuous, silt and silty very fine sand layers. Soil descriptions and PID readings are shown on the boring logs provided in Appendix A.

The reconnaissance ground water samples were collected via temporary wells installed at three separate depth intervals in each boring, a shallow (1-20 feet bgs), an intermediate (18-34 feet bgs), and a deep (35-45 feet bgs) ground water interval depth. Sampling intervals within these general ranges were selected based on occurrence of ground water, filed screening indications, and lithology (i.e., preference given to sandier, more permeable layers). The temporary wells were each developed for between 30 to 50 minutes prior to collecting the ground water sample via a low-flow peristaltic pump and disposable polyethylene tubing.

Soil and ground water samples were collected in clean, unused, laboratory-supplied containers, labeled with pertinent sampling information, transferred to an ice-filled, insulated cooler, and transported to the analytical laboratory under chain-of-custody procedures. Ground water samples were submitted for chemical analysis of HVOCs with one follow up soil sample analysis conducted from each boring. Soil samples were selected for analysis based on the highest detections of HVOCs from the corresponding depth ground water sample. All soil and ground water samples were analyzed by OnSite Environmental of Redmond, Washington, an Ecology-accredited third-party analytical laboratory.

Results and Conclusions

Ground water and soil analytical data from the reconnaissance sampling is summarized on Tables 1 and 2. Laboratory results are included in Appendix B. Figures 1a, 1b, and 1c show the most recent PCE ground water concentrations from 2007-2017, including the new data form this study, and iso-concentration contours for PCE in the shallow, intermediate, and deep zones, respectively. Figure 2 shows the most recent VC concentrations in ground water from 2007-2017. Figure 3 shows historical PCE and VC concentrations in ground water (2007 – 2013). Figure 4 shows the most recent concentrations of all HVOCs in ground water, from 2014 – 2017.

None of the soil samples collected from each boring (at depths with the highest HVOC ground water concentrations) contained any HVOC exceeding cleanup levels. Six of the 10 soil samples did not contain any HVOCs above laboratory reporting limits. This suggests no source areas at or near any of the borings.

Based on the ground water analytical results obtained from this investigation, the downgradient, southern end of the HVOC plume from the Ultra Site extends further south and southeast than previously estimated, with low HVOC detections in the intermediate and deeper portions of the aquifer. The PCE concentrations decrease with distance traveled to the southeast, and with depth from the intermediate to the deeper zone. These conclusions are supported by the following:

- Borings UCCB-2 and UCCB-8, the most northern borings advanced during this investigation and within the formerly known limits of the Ultra HVOC plume, both had PCE detections above the Model Toxic Control Act (MTCA) Method A cleanup level in the intermediate and deeper portions of the aquifer. Boring UCCB-8 also had a VC detection above the cleanup level in the intermediate portion of the aquifer. HVOC concentrations in the deeper layers were lower than in the intermediate.
- Boring UCCB-4, located southeast of the previously delineated southeastern extent of the plume, also had detections of PCE above cleanup levels in both the intermediate and deeper portions of the aquifer, while the shallow ground water sample collected from this boring was non-detect for PCE.
- Borings UCCB-5 and UCCB-9, both located to the southeast of UCCB-4, had PCE detections below the cleanup levels in the intermediate and deeper portions of the aquifer and no PCE detected in the shallow ground water sample.
- PCE was not detected in any of the ground water samples collected from borings UCCB-6 and UCCB-7, both located to the southeast of UCCB-4 and UCCB-9, which indicates the HVOC plume likely does not extend this far southeast from the source area.
- Borings UCCB-1 and UCCB-10, located southwest of the previously delineated plume, did not have any HVOCs exceeding cleanup levels, confirming the southwest plume boundary.

It appears that the Ultra Site HVOC plume is not likely a potential upgradient source of HVOC ground water impacts to the Riverside Site. This conclusion is supported by the following:

- Ground water samples collected from the shallow, intermediate, and deep portions of the aquifer in borings UCCB-6 and UCCB-7, located to the northwest of the Riverside Site, did not have any HVOC detections.
- PCE detections from the borings advanced further northwest of the Riverside Site, borings UCCB-5 and UCCB-9, indicate that PCE is either not present or at

concentrations below the cleanup level in the shallow, intermediate, and deep portions of the aquifer.

- Recent ground water samples collected from a monitoring well on the Riverside Site, well RMW-12, had a PCE concentration well above the cleanup level in the shallow portion of the aquifer.
- The highest HVOC concentrations south of Main Street were detected at RMW-12 and some of the Riverside extraction wells. RMW-12 is located adjacent to the strongest anomaly detected by a recent soil gas survey conducted in this area, suggesting a possible HVOC source of the Riverside plume in this area.

We appreciate the opportunity to provide our services to you on this project. Please feel free to call us if you have any questions or need more information.

Sincerely,
HWA GEOSCIENCES INC.

Nicole Kapise
Senior Environmental Geologist

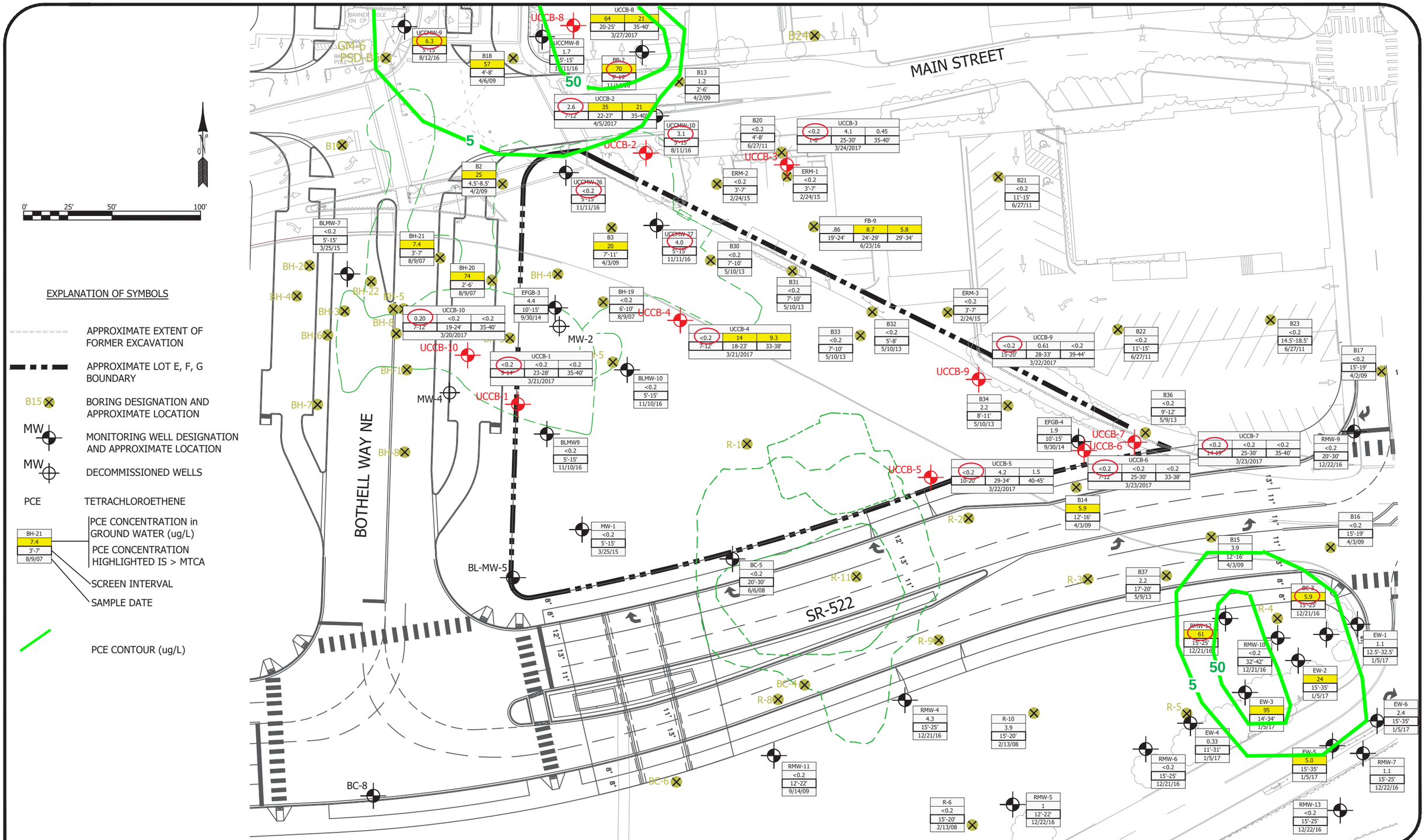
Arnie Sugar, LG, LHG
Principal Hydrogeologist

Attachments:

Figure 1a - PCE in Ground Water, 2007-2017 (most recent), Shallow zone contours
Figure 1b - PCE in Ground Water, 2007-2017 (most recent), Intermediate zone contours
Figure 1c - PCE in Ground Water, 2007-2017 (most recent), Deep zone contours
Figure 2 - VC in Ground Water, 2007-2017 (most recent)
Figure 3 - PCE and VC in Ground Water, 2007 – 2013
Figure 4 - HVOCs in Ground Water, 2014 - 2017 (most recent)

Table 1: Analytical Results for Reconnaissance Ground Water Samples

Appendix A: Subsurface Boring Logs
Appendix B: Laboratory Analytical Results



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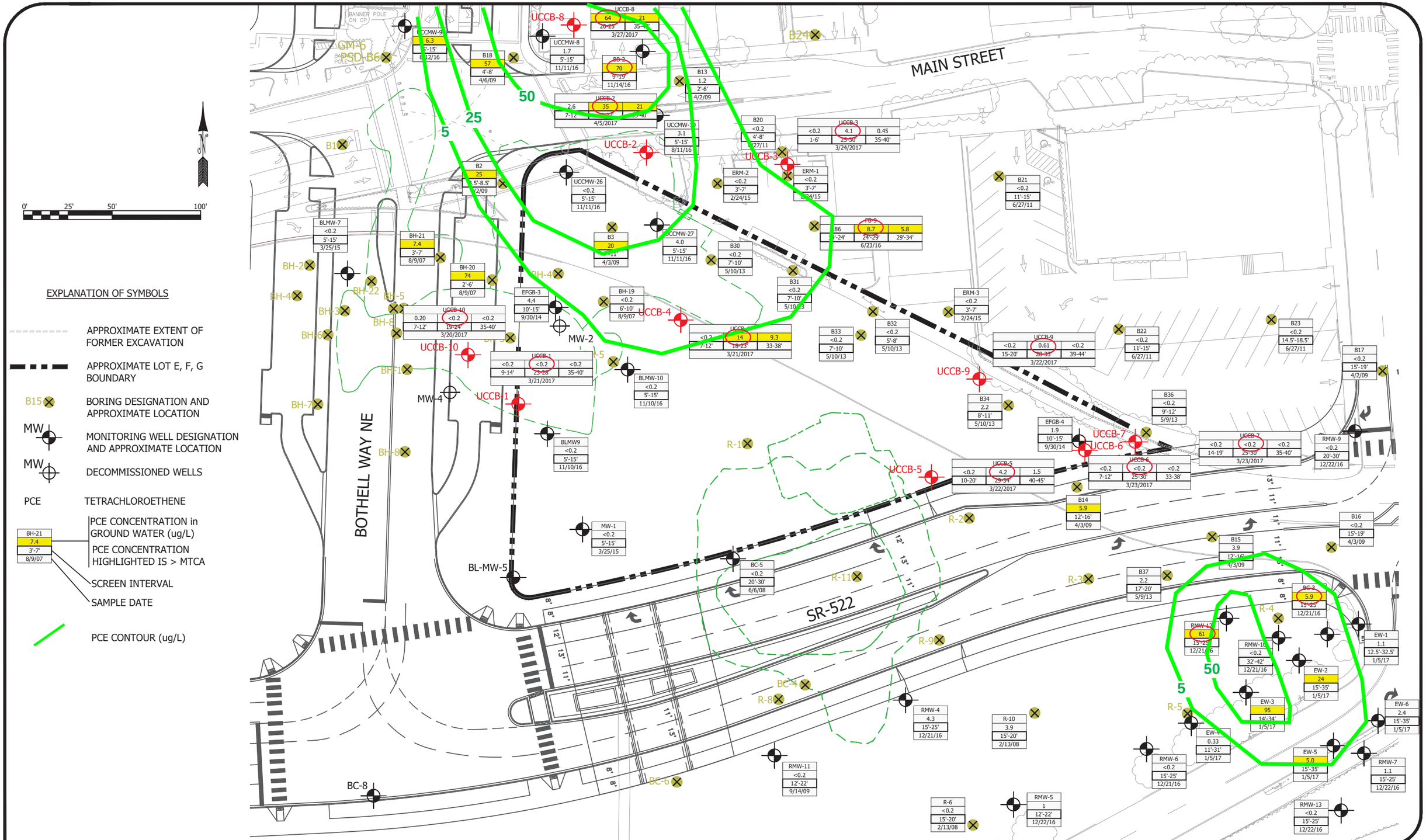
ULTRA CUSTOM CARE CLEANERS /RIVERSIDE HVOC SITE BOTHELL, WASHINGTON

PCE in Ground Water, 2007-2017 (Shallow)

DRAWN BY EFK
CHECK BY AS/NK/AY
DATE 1/26/17

FIGURE NO. 1a
PROJECT NO. 2007-098 T2045

S:\2007 PROJECTS\2007-098-22 BOTHELL CROSSROADS\CAD 2007-098\HWA 2007-098-21 T2045 A.DWG <PCE FIG 1 X CON> Plotted: 5/16/2017 12:44 PM



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ULTRA CUSTOM CARE CLEANERS /RIVERSIDE HVOC SITE BOTHELL, WASHINGTON

PCE in Ground Water, 2007-2017 (Intermediate)

DRAWN BY EFK

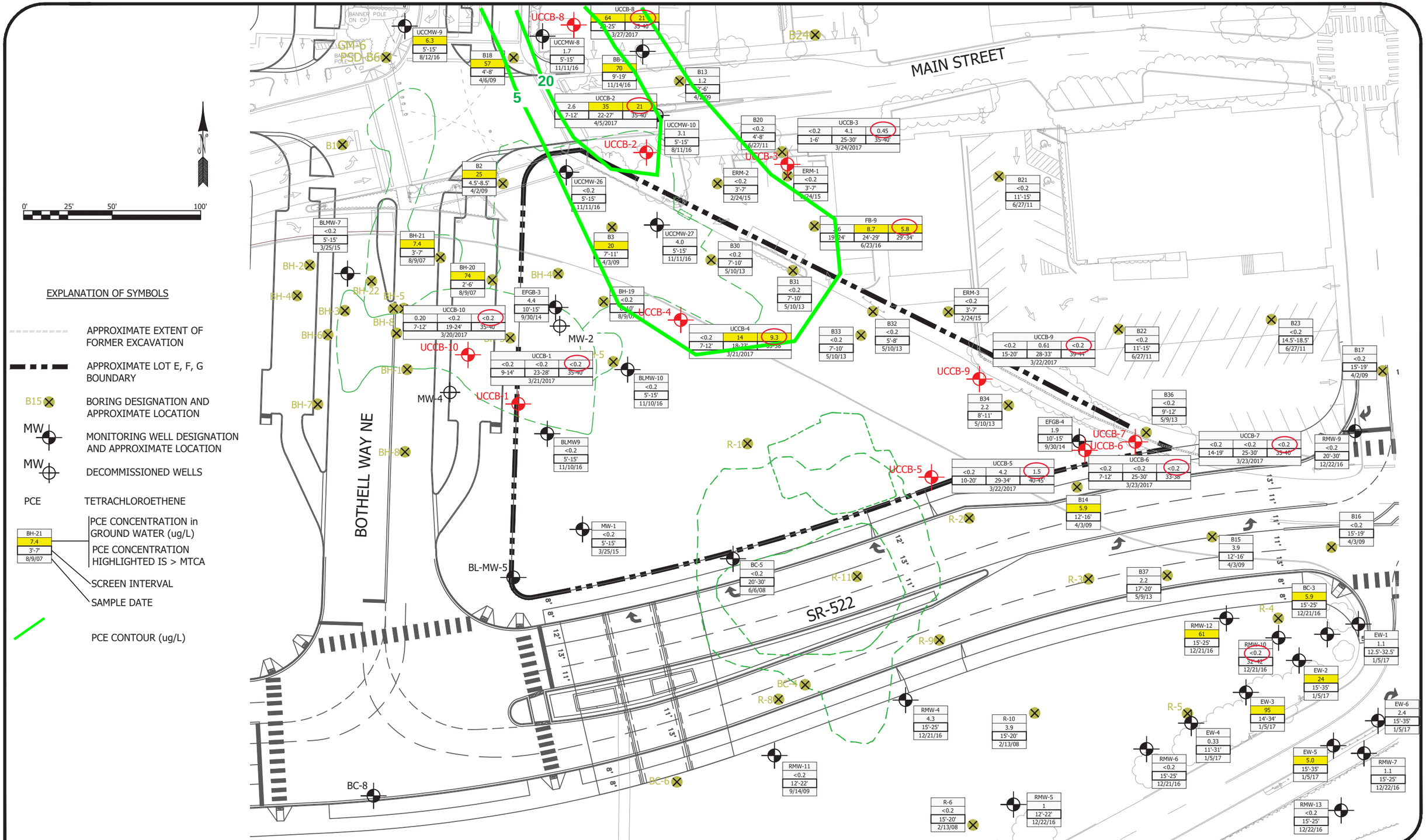
CHECK BY AS/NK/AY

DATE 1/26/17

FIGURE NO. 1b

PROJECT NO. 2007-098 T2045

S:\2007 PROJECTS\2007-098-22 BOTHELL CROSSROADS\CAD 2007-098\HWA 2007-098-21 T2045 A.DWG <PCE FIG 1 X CON> Plotted: 5/16/2017 12:44 PM



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ULTRA CUSTOM CARE CLEANERS /RIVERSIDE HVOC SITE BOTHELL, WASHINGTON

PCE in Ground Water, 2007-2017 (Deep)

DRAWN BY EFK

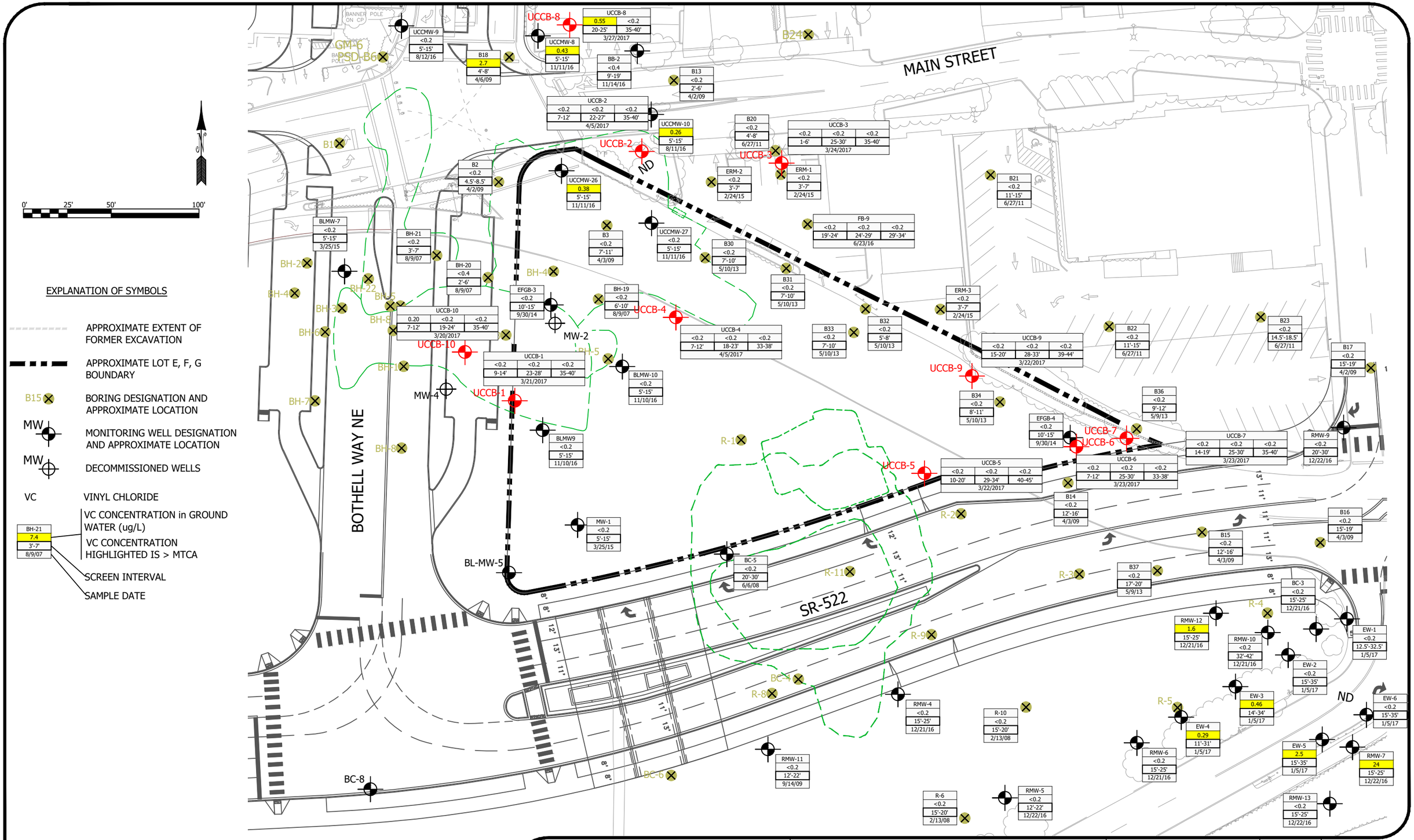
CHECK BY AS/NK/AY

DATE 1/26/17

FIGURE NO. 1c

PROJECT NO. 2007-098 T2045

S:\2007 PROJECTS\2007-098-22 BOTHELL CROSSROADS\CAD 2007-098\HWA 2007-098-21 T2045 A.DWG <PCE FIG 1 X CON> Plotted: 5/16/2017 12:44 PM



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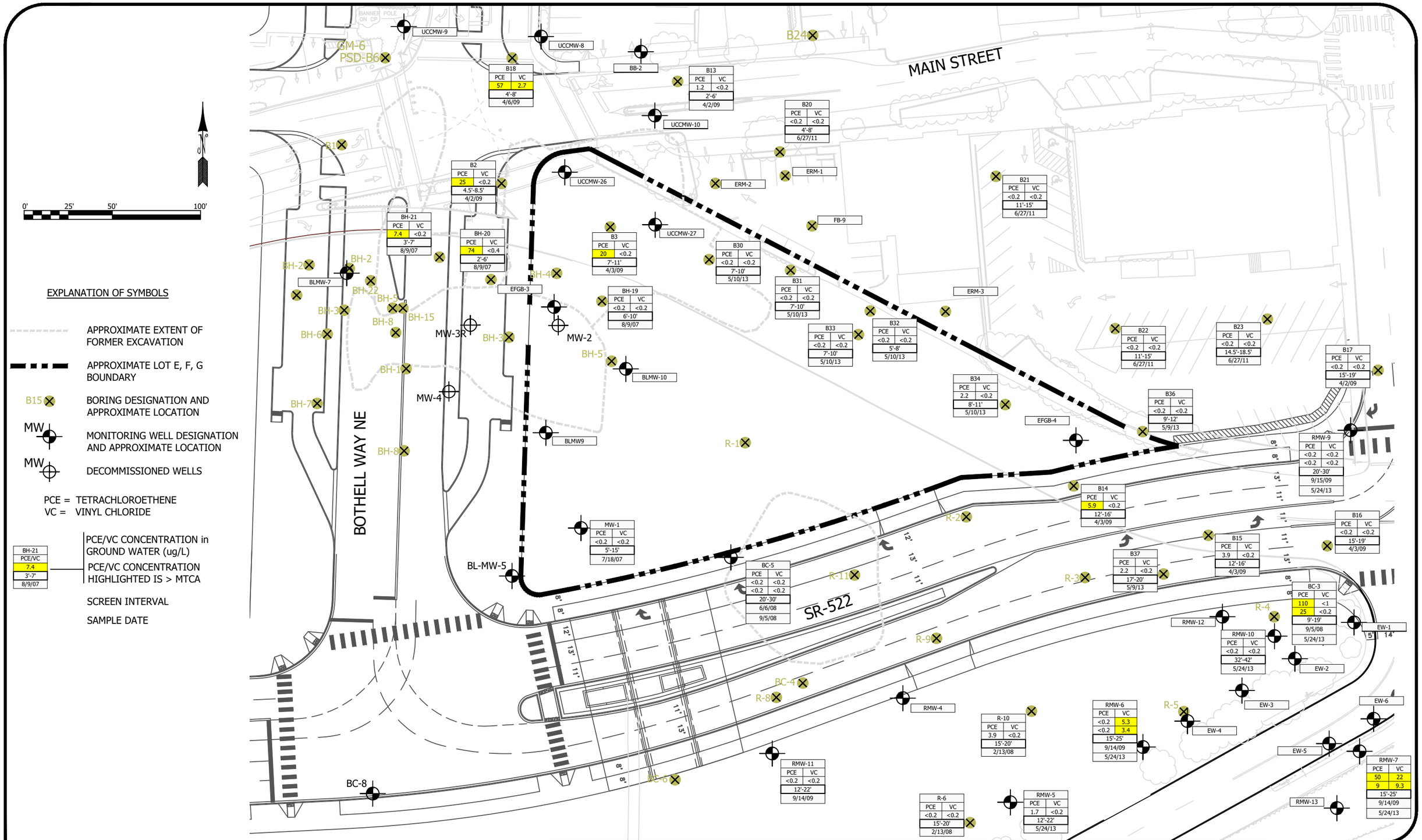
ULTRA CUSTOM CARE CLEANERS /RIVERSIDE HVOC SITE BOTHELL, WASHINGTON

VC in Ground Water, 2007-2017 (Most Recent)

DRAWN BY EFK
CHECK BY AS/NK/AY
DATE 1/26/17

FIGURE NO. 2
PROJECT NO. 2007-098 T2045

S:\2007 PROJECTS\2007-098-22 BOTHELL CROSSROADS\CAD 2007-098\HWA 2007-098-21 T2045 A.DWG <VC FIG 2 X CO□> Plotted: 5/1□/2017 12:43 PM



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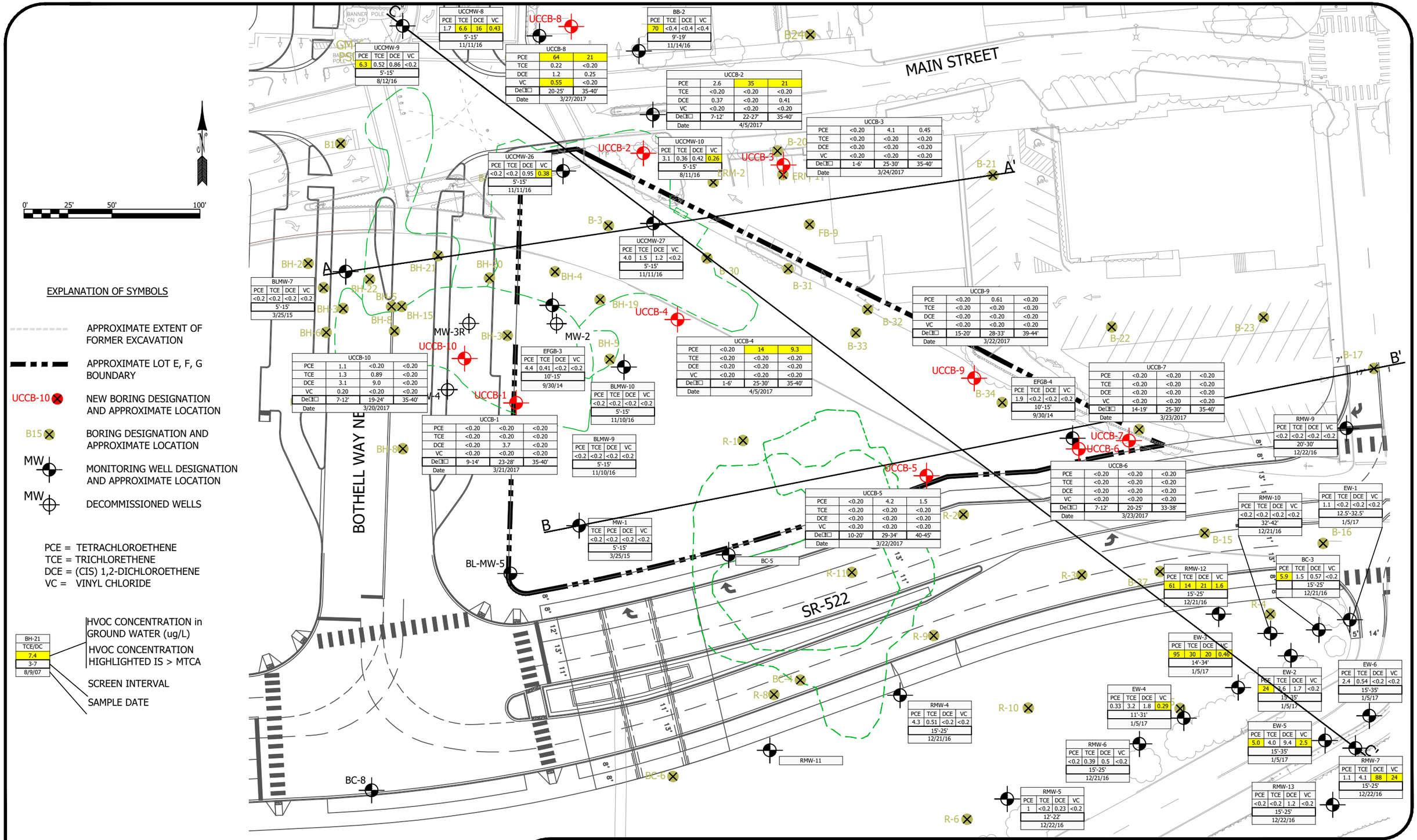
ULTRA CUSTOM CARE CLEANERS /RIVERSIDE HVOC SITE BOTHELL, WASHINGTON

PCE & VC in Ground Water, 2007-2013

DRAWN BY EFK
CHECK BY AS/NK/AY
DATE 1/21/17

FIGURE NO. 3
PROJECT NO. 2007-098 T2045

S:\2007 PROJECTS\2007-098-22 BOTHELL CROSSROADS\CAD 2007-098\HWA 2007-098-21 T2045 A.DWG <PCE VC FIG 3x> Plotted: 1/27/2017 5:28 PM



HWA GEOSCIENCES INC.

ULTRA CUSTOM CARE CLEANERS /RIVERSIDE HVOC SITE BOTHELL, WASHINGTON

HVOC□n Ground Water 2014-2017 (MOST RECENT)

DRAWN BY EFK

CHECK BY AS/NK/AY

DATE 1/21/17

FIGURE NO. 4

PROJECT NO. 2007-098 T2045

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Table 1
UCC/Riverside HVOC Site
Ground Water Analytical Data

Sample Location	Sample Date	Screened Depth, (ft bgs)	Tetrachloro-ethene (µg/L)	Trichloro-ethene (µg/L)	(cis) 1,2-Dichloro-ethene (µg/L)	Vinyl Chloride (µg/L)
MTCA Method A/B Cleanup Level (Table 720-1, WAC 173-340-900)			**5**	**5**	**16 (B)**	**0.2**
Boring						
UCCB-1	3/21/2017	9-14	<0.20	<0.20	<0.20	<0.20
		23-28	<0.20	<0.20	**3.7**	<0.20
		35-40	<0.20	<0.20	<0.20	<0.20
UCCB-2	4/5/2017	7-12	**2.6**	<0.20	**0.37**	<0.20
		22-27	**35**	<0.20	<0.20	<0.20
		35-40	**21**	<0.20	**0.41**	<0.20
UCCB-3	3/24/2017	1-6	<0.20	<0.20	<0.20	<0.20
		25-30	**4.1**	<0.20	<0.20	<0.20
		35-40	**0.45**	<0.20	<0.20	<0.20
UCCB-4	4/5/2017	7-12	<0.20	<0.20	<0.20	<0.20
		18-23	**14**	<0.20	<0.20	<0.20
		33-38	**9.3**	<0.20	<0.20	<0.20
UCCB-5	3/22/2017	10-20	<0.20	<0.20	<0.20	<0.20
		29-34	**4.2**	<0.20	<0.20	<0.20
		40-45	**1.5**	<0.20	<0.20	<0.20
UCCB-6	3/23/2017	7-12	<0.20	<0.20	<0.20	<0.20
		20-25	<0.20	<0.20	<0.20	<0.20
		33-38	<0.20	<0.20	<0.20	<0.20
UCCB-7	3/23/2017	14-19	<0.20	<0.20	<0.20	<0.20
		25-30	<0.20	<0.20	<0.20	<0.20
		35-40	<0.20	<0.20	<0.20	<0.20
UCCB-8	3/27/2017	N/A	N/A	N/A	N/A	N/A
		20-25	**64**	**0.22**	**1.2**	**0.55**
		35-40	**21**	<0.20	**0.25**	<0.20
UCCB-9	3/22/2017	15-20	<0.20	<0.20	<0.20	<0.20
		28-33	**0.61**	<0.20	<0.20	<0.20
		39-44	<0.20	<0.20	<0.20	<0.20
UCCB-10	3/20/2017	7-12	**1.1**	**1.3**	**3.1**	**0.20**
		19-24	<0.20	**0.89**	**9.0**	<0.20
		35-40	<0.20	<0.20	<0.20	<0.20
Investigation Results by Others						
Farallon Consulting						
FB-9	6/23/2016	22	**0.86**	<0.20	<0.20	<0.20
	6/23/2016	27	**8.7**	<0.20	<0.20	<0.20
	6/23/2016	32	**5.8**	<0.20	<0.20	<0.20
QC Samples						
Dup 1 (UCCB-6-22)	3/23/2017		<0.20	<0.20	<0.20	<0.20
Dup 2 (UCCB-4-9.5)	4/5/2014		<0.20	<0.20	<0.20	<0.20
Trip Blank	3/20/2017		<0.20	<0.20	<0.20	<0.20
Trip Blank	3/21/2017		<0.20	<0.20	<0.20	<0.20
Trip Blank	3/22/2017		<0.20	<0.20	<0.20	<0.20
Trip Blank	3/23/2017		<0.20	<0.20	<0.20	<0.20
Trip Blank	3/24/2017		<0.20	<0.20	<0.20	<0.20
Trip Blank	3/27/2017		<0.20	<0.20	<0.20	<0.20
Trip Blank	4/5/2017		<0.20	<0.20	<0.20	<0.20

< – Analyte not detected at laboratory's listed reporting limit
Bold indicates analyte detected at a concentration greater than the laboratory reporting limit
Yellow highlight indicates analyte meets or exceeds MTCA cleanup level
Blank – not analyzed or not measured at that sampling location
NA – Not applicable

Table 2
UCC/Riverside HVOC Site
Soil Analytical Data

Sample Location	Sample Date	Soil Sample Depth[1], (ft bgs)	Tetrachloro-ethene (mg/kg)	Trichloro-ethene (mg/kg)	(cis) 1,2-Dichloro-ethene (mg/kg)	Vinyl Chloride (mg/kg)
MTCA Method A/B Cleanup Level (Table 720-1, WAC 173-340-900)			**0.05**	**0.03**	**160 (B)**	**0.67 (B)**
Boring						
UCCB-1	3/21/2017	25.5	<0.00096	<0.00096	**0.0016**	<0.00096
UCCB-2	4/5/2017	27.5	**0.046**	<0.0012	<0.0012	<0.0012
UCCB-3	3/24/2017	32.5	**0.0015**	<0.0011	<0.0011	<0.0011
UCCB-4	4/5/2017	25	**0.034**	<0.00099	<0.00099	<0.00099
UCCB-5	3/22/2017	36	<0.0011	<0.0011	<0.0011	<0.0011
UCCB-6	3/23/2017	25.5	<0.0012	<0.0012	<0.0012	<0.0012
UCCB-7	3/23/2017	20	<0.0012	<0.0012	<0.0012	<0.0012
UCCB-8	3/27/2017	25	**0.025**	<0.0011	<0.0011	<0.0011
UCCB-9	3/22/2017	35.5	<0.0012	<0.0012	<0.0012	<0.0012
UCCB-10	3/20/2017	11	<0.00088	<0.00088	<0.00088	<0.00088

1 - Soil samples were selected for analysis based on the highest detections of HVOCs from the corresponding depth of ground water sample

< – Analyte not detected at laboratory's listed reporting limit

Bold indicates analyte detected at a concentration greater than the laboratory reporting limit

APPENDIX A
BORING LOGS

RELATIVE DENSITY OR CONSISTENCY VERSUS SPT N-VALUE

COHESIONLESS SOILS			COHESIVE SOILS		
Density	N (blows/ft)	Approximate Relative Density(%)	Consistency	N (blows/ft)	Approximate Undrained Shear Strength (psf)
Very Loose	0 to 4	0 - 15	Very Soft	0 to 2	<250
Loose	4 to 10	15 - 35	Soft	2 to 4	250 - 500
Medium Dense	10 to 30	35 - 65	Medium Stiff	4 to 8	500 - 1000
Dense	30 to 50	65 - 85	Stiff	8 to 15	1000 - 2000
Very Dense	over 50	85 - 100	Very Stiff	15 to 30	2000 - 4000
			Hard	over 30	>4000

USCS SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS			GROUP DESCRIPTIONS	
Coarse Grained Soils	Gravel and Gravelly Soils	Clean Gravel (little or no fines)	GW	Well-graded GRAVEL
			GP	Poorly-graded GRAVEL
	More than 50% of Coarse Fraction Retained on No. 4 Sieve	Gravel with Fines (appreciable amount of fines)	GM	Silty GRAVEL
			GC	Clayey GRAVEL
	Sand and Sandy Soils	Clean Sand (little or no fines)	SW	Well-graded SAND
			SP	Poorly-graded SAND
More than 50% Retained on No. 200 Sieve Size	50% or More of Coarse Fraction Passing No. 4 Sieve	Sand with Fines (appreciable amount of fines)	SM	Silty SAND
			SC	Clayey SAND
Fine Grained Soils	Silt and Clay	Liquid Limit Less than 50%	ML	SILT
			CL	Lean CLAY
			OL	Organic SILT/Organic CLAY
50% or More Passing No. 200 Sieve Size	Silt and Clay	Liquid Limit 50% or More	MH	Elastic SILT
			CH	Fat CLAY
			OH	Organic SILT/Organic CLAY
Highly Organic Soils			PT	PEAT

TEST SYMBOLS

%F	Percent Fines
AL	Atterberg Limits: PL = Plastic Limit, LL = Liquid Limit
CBR	California Bearing Ratio
CN	Consolidation
DD	Dry Density (pcf)
DS	Direct Shear
GS	Grain Size Distribution
K	Permeability
MD	Moisture/Density Relationship (Proctor)
MR	Resilient Modulus
PID	Photoionization Device Reading
PP	Pocket Penetrometer Approx. Compressive Strength (tsf)
SG	Specific Gravity
TC	Triaxial Compression
TV	Torvane Approx. Shear Strength (tsf)
UC	Unconfined Compression

SAMPLE TYPE SYMBOLS

- 2.0" OD Split Spoon (SPT) (140 lb. hammer with 30 in. drop)
- Shelby Tube
- 3-1/4" OD Split Spoon with Brass Rings
- Small Bag Sample
- Large Bag (Bulk) Sample
- Core Run
- Non-standard Penetration Test (3.0" OD split spoon)

GROUNDWATER SYMBOLS

- Groundwater Level (measured at time of drilling)
- Groundwater Level (measured in well or open hole after water level stabilized)

COMPONENT DEFINITIONS

COMPONENT	SIZE RANGE
Boulders	Larger than 12 in
Cobbles	3 in to 12 in
Gravel	3 in to No 4 (4.5mm)
Coarse gravel	3 in to 3/4 in
Fine gravel	3/4 in to No 4 (4.5mm)
Sand	No. 4 (4.5 mm) to No. 200 (0.074 mm)
Coarse sand	No. 4 (4.5 mm) to No. 10 (2.0 mm)
Medium sand	No. 10 (2.0 mm) to No. 40 (0.42 mm)
Fine sand	No. 40 (0.42 mm) to No. 200 (0.074 mm)
Silt and Clay	Smaller than No. 200 (0.074mm)

COMPONENT PROPORTIONS

PROPORTION RANGE	DESCRIPTIVE TERMS
< 5%	Clean
5 - 12%	Slightly (Clayey, Silty, Sandy)
12 - 30%	Clayey, Silty, Sandy, Gravelly
30 - 50%	Very (Clayey, Silty, Sandy, Gravelly)
Components are arranged in order of increasing quantities.	

NOTES: Soil classifications presented on exploration logs are based on visual and laboratory observation. Soil descriptions are presented in the following general order:

Density/consistency, color, modifier (if any) GROUP NAME, additions to group name (if any), moisture content. Proportion, gradation, and angularity of constituents, additional comments. (GEOLOGIC INTERPRETATION)

Please refer to the discussion in the report text as well as the exploration logs for a more complete description of subsurface conditions.

MOISTURE CONTENT

DRY	Absence of moisture, dusty, dry to the touch.
MOIST	Damp but no visible water.
WET	Visible free water, usually soil is below water table.

HWA GEOSCIENCES INC.

UCC/RIVERSIDE HVOC SITE
RECON GROUND WATER SAMPLING
BOTHELL, WASHINGTON

LEGEND OF TERMS AND SYMBOLS USED ON EXPLORATION LOGS

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

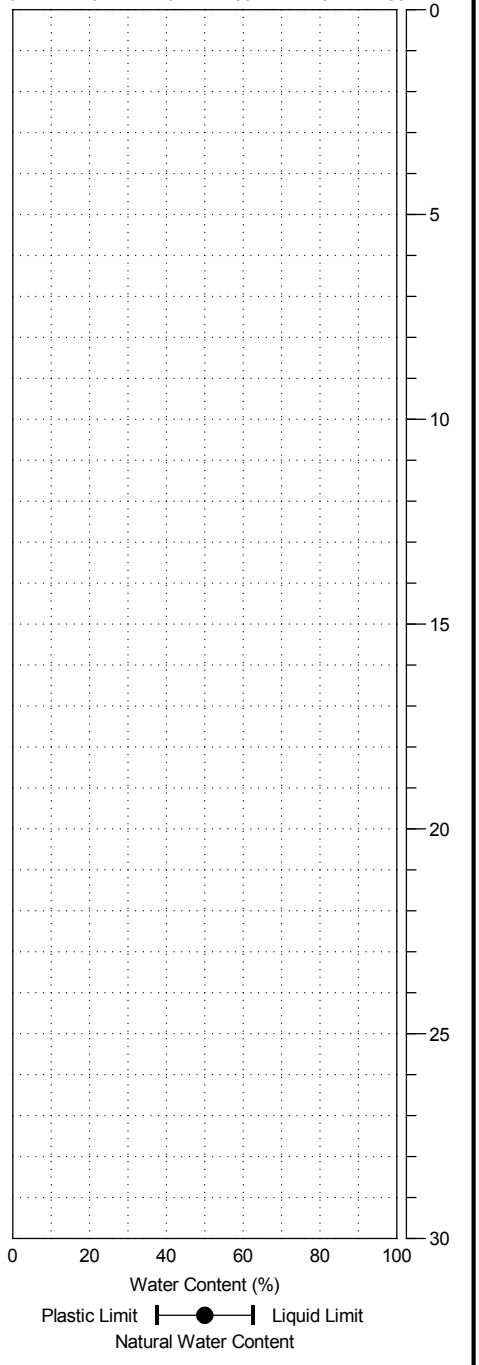
LOCATION: Bothell, Washington
DATE STARTED: 3/21/2017
DATE COMPLETED: 3/21/2017
LOGGED BY: N. Kapise

DEPTH (feet)	USCS SOIL CLASS	DESCRIPTION	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)
0		Utility trench backfill		
	SP	Brown, fine to medium SAND with trace gravel and silt, moist	B1-3	15-20-19
5	SP	Medium dense, olive gray, gravelly, fine to medium SAND with silt, moist	B1-6	10-7-8
	SM	Loose, olive gray, silty, gravelly, fine SAND with trace organics, moist	B1-8	4-2-4
	PT	Loose, brown peat, moist		
10	PT	Loose, brown peat, with very fine to fine sand, wet (1st encounter ground water)	B1-10.5	5-7-6
	SP	Medium dense, gray, fine to medium SAND with silt, moist	B1-13.5	10-13-13
15	SP	Medium dense, gray, very fine to fine SAND with trace silt, moist	B1-16	6-7-11
			B1-18	18-20-20
20			B1-21	20-19-23
	SP	Medium dense to very dense, gray, fine to medium SAND with silt and trace gravel and coarse sand, moist, wet at 25 feet (2nd encounter ground water)	B1-23	27-50 for 6
25			B1-25.5	19-21-26
			B1-28	21-23-25
30	SM	Medium dense to very dense, gray, silty, very fine to fine		

OTHER TESTS

GROUNDWATER

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-1

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/21/2017
DATE COMPLETED: 3/21/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30			SAND with trace gravel, moist, wet at 37 feet		B1-31	17-26-27		
					B1-33.5	19-50 for 6		
35		SW	Very dense, gray, fine to course SAND with silt and trace gravel, moist, wet at 37 feet (3rd encounter ground water)		B1-35	50 for 6		
					B1-37.5	31- 50 for 6		
40		SP	Very dense, gray, very fine SAND with silt and trace gravel, moist		B1-40	50 for 6		
45			Exploration terminated at 41.5 feet. Ground water encountered at approximately 10, 25, and 37 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 9 to 14, 23 to 28, and 35 to 40 feet.					
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 20 40 60 80 100

Water Content (%)

Plastic Limit — Liquid Limit

Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

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HWA GEOSCIENCES INC.

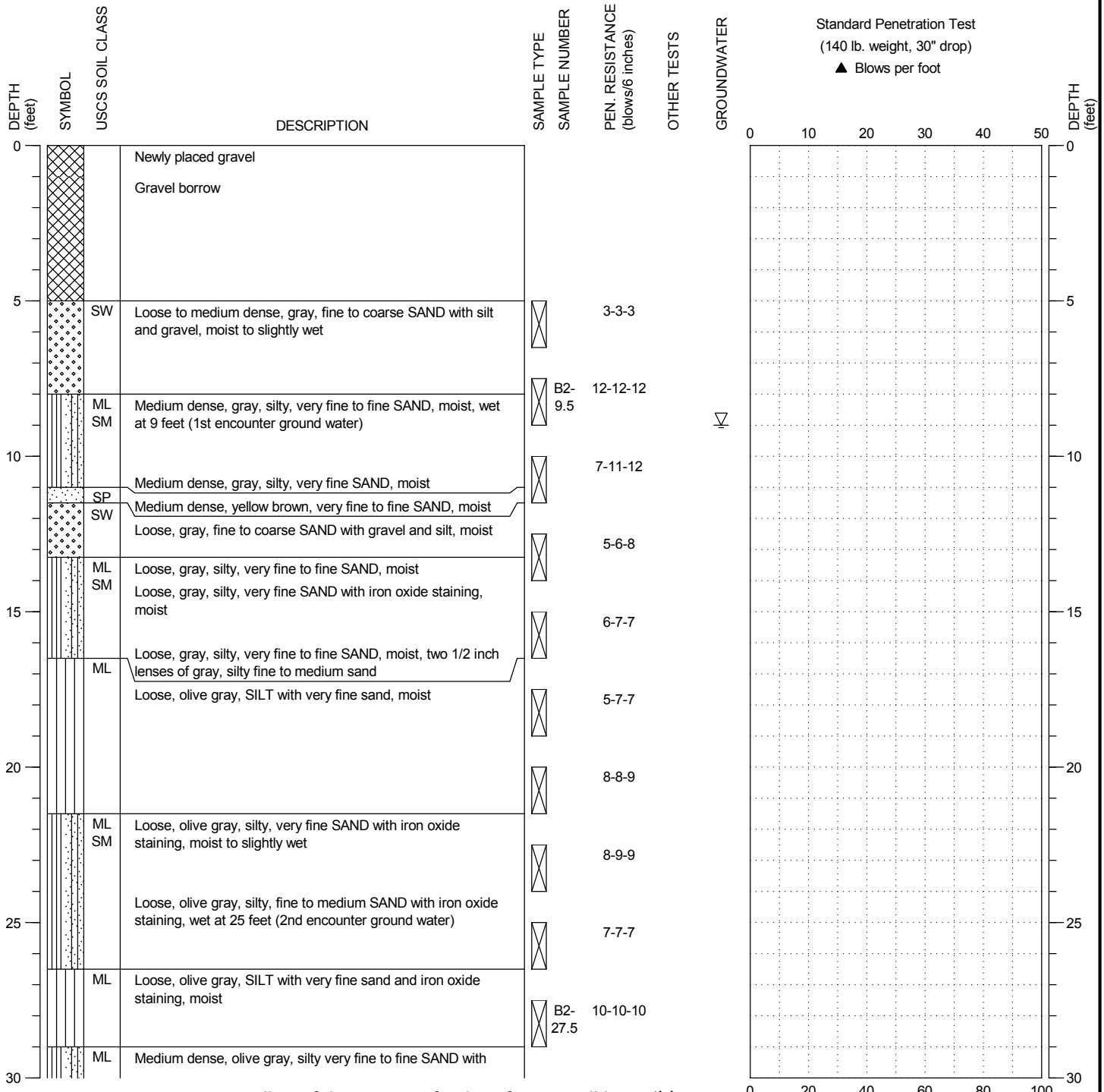
Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-1

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 34.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 4/5/2017
DATE COMPLETED: 4/5/2017
LOGGED BY: N. Kapise



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-2

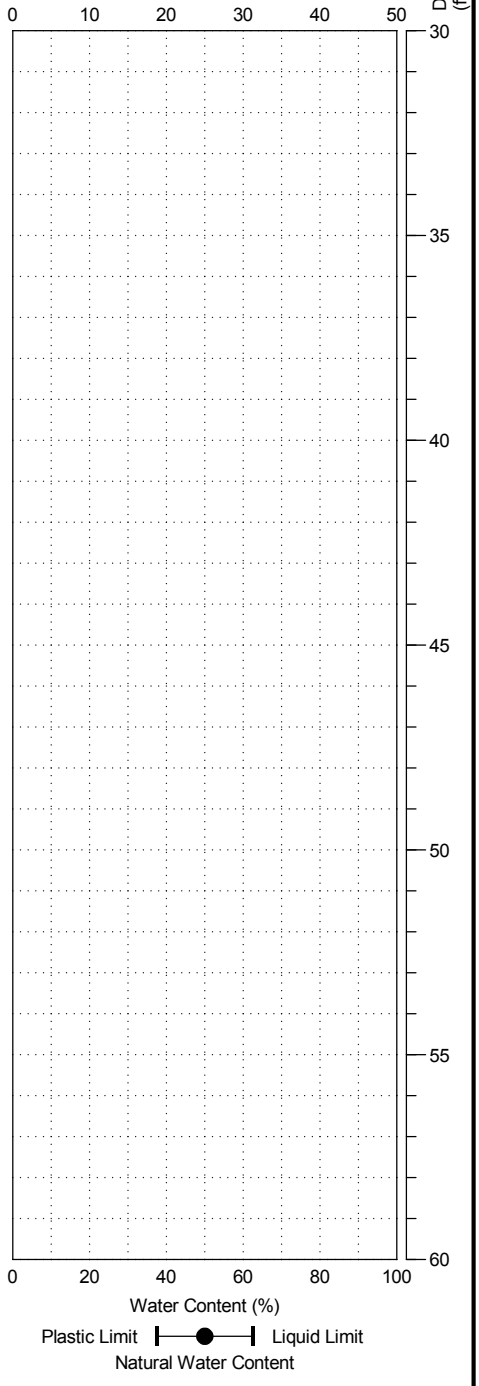
PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 34.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 4/5/2017
DATE COMPLETED: 4/5/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30		SM	iron oxide staining, moist, 3 inch lense of olive gray, laminated silt with very fine sand			10-13-14		
		ML SM	Medium dense to very dense, olive gray, silty, very fine to fine SAND with iron oxide staining , moist, 1/2 inch lense of gray silt at 33.75 feet			17-19-21		
35		ML SM	Very dense, gray, gravelly, silty, fine SAND with trace medium to coarse sand, wet at 37 feet (3rd encounter ground water)			50 for 6		
					B2-38	50 for 6		
40						50 for 6		
45			Exploration terminated at 40.5 feet. Ground water encountered at approximately 9, 25, and 37 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 7 to 12, 22 to 27, and 35 to 40 feet.					
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-2

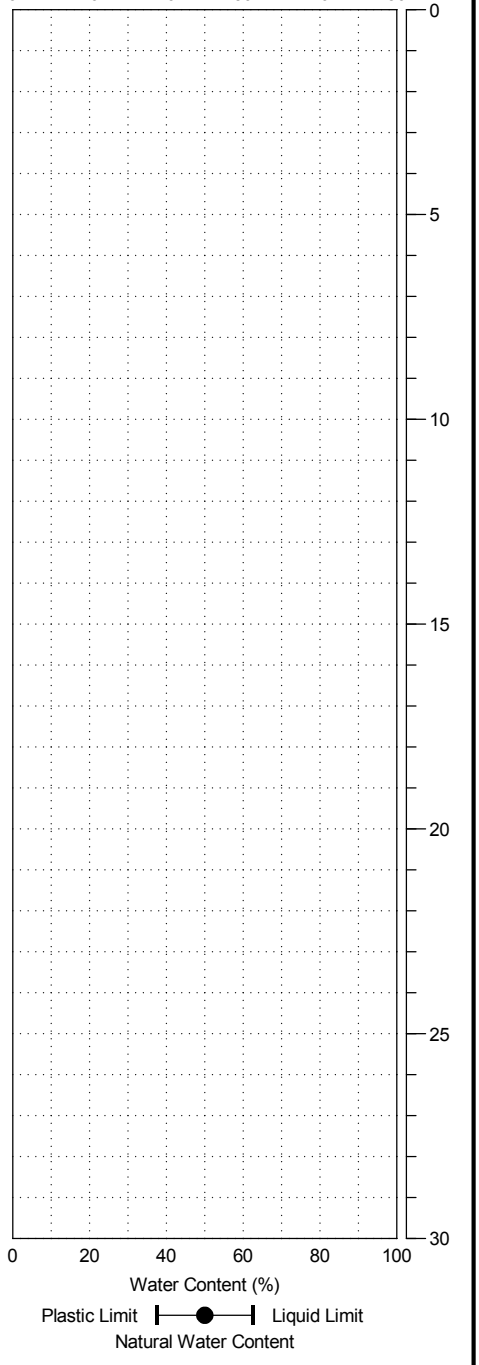
PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/24/2017
DATE COMPLETED: 3/24/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
0		ML SM	Olive gray, silty, fine to medium SAND, wet at 3.5 to 4 feet (1st encounter ground water)					
5		ML SM	Loose, yellow brown, silty, fine to medium SAND with trace gravel, moist		B3-5	4-5-6		
		ML SM	Loose, olive gray, silty, very fine SAND with iron oxide staining, moist			7-9-9		
10						7-8-8		
						8-7-10		
15						8-9-9		
		ML SM	Loose, olive gray, silty, very fine to fine SAND with iron oxide staining, moist			6-6-8		
20		ML SM	Medium dense, olive gray, silty, very fine SAND with iron oxide staining, moist to slightly wet			11-12-13		
		ML SM	Medium dense, olive gray to gray, silty, very fine SAND with iron oxide staining and lamination visible at 25 feet, moist			15-17-19		
25						11-14-15		
		SP	Medium dense, olive gray, very fine to fine SAND with silt, moist, wet at 27 feet (2nd encounter ground water)			16-19-22		
30		ML	Medium dense, olive gray, silty, fine SAND, moist, 2 inch					

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-3

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/24/2017
DATE COMPLETED: 3/24/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30		SM	laminated silt lense at 33.5 feet					
					B3-32.5	13-15-16		
35		ML SM	Medium dense, olive gray, silty, very fine to fine SAND with iron oxide staining, moist, wet at 38 feet (3rd encounter ground water)			17-19-21		
					B3-39	12-16-27		
40		SW	Medium dense, olive gray, gravely, fine to coarse SAND with silt, moist to wet					
45			Exploration terminated at 40 feet. Ground water encountered at approximately 4, 27, and 38 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 1 to 6, 25 to 30, and 35 to 40 feet.					
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet) 30 35 40 45 50 55 60

0 20 40 60 80 100
Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

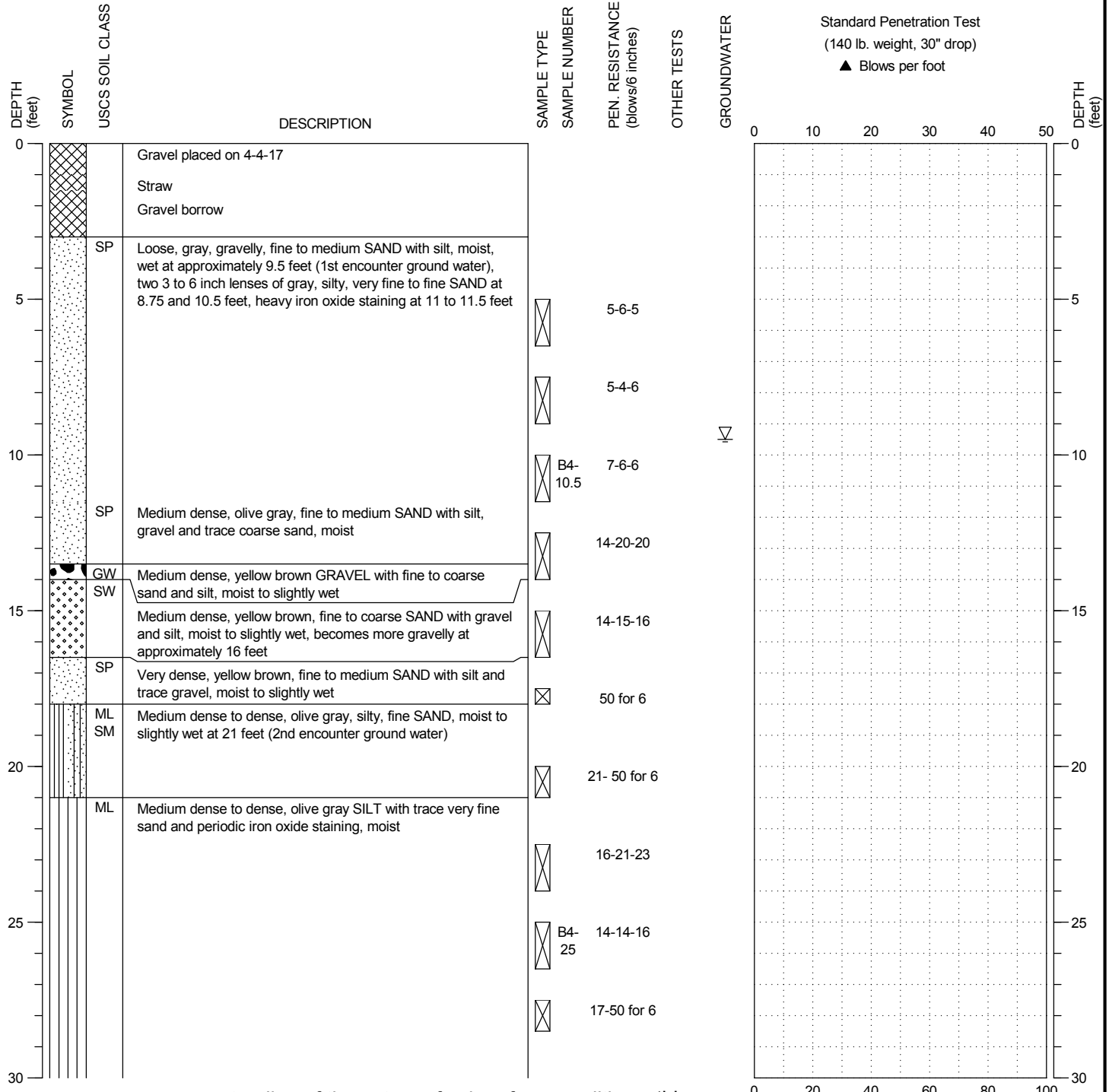
BORING:
UCCB-3

PAGE: 2 of 2

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 4/5/2017
DATE COMPLETED: 4/5/2017
LOGGED BY: N. Kapise



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-4

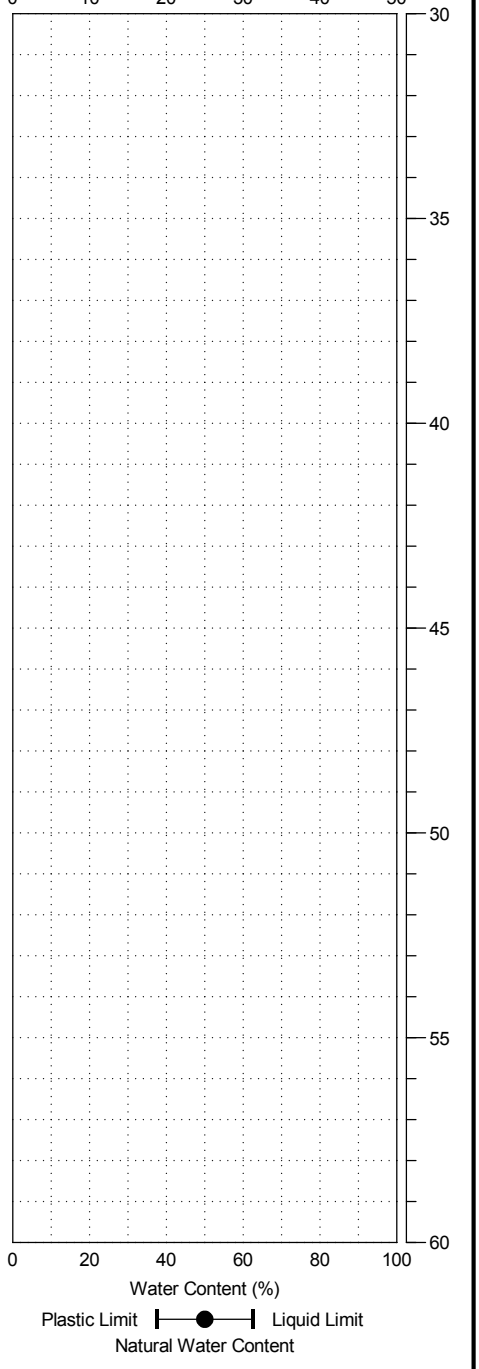
PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 4/5/2017
DATE COMPLETED: 4/5/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30						15-15-15		
		ML SM	Medium dense, olive gray, silty, very fine to fine SAND with trace medium sand, moist, iron oxide staining at 32.75 feet, increase in medium sand at 33.75 feet			26-21-21		
35		ML	Medium dense to very dense, olive gray, SILT with trace very fine sand, moist, 6 inch lense of gray silty fine to medium sand with trace course sand and gravel that was slightly wet at approximately 35.5 feet (3rd encounter ground water)		B4-36.5	21-20-20		
						20-20-20		
40						50 for 6		
45			Exploration terminated at 40.5 feet. Ground water encountered at approximately 9.5, 21, and 35.5 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 7 to 12, 18 to 23, and 33 to 38 feet.					
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



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HWA GEOSCIENCES INC.

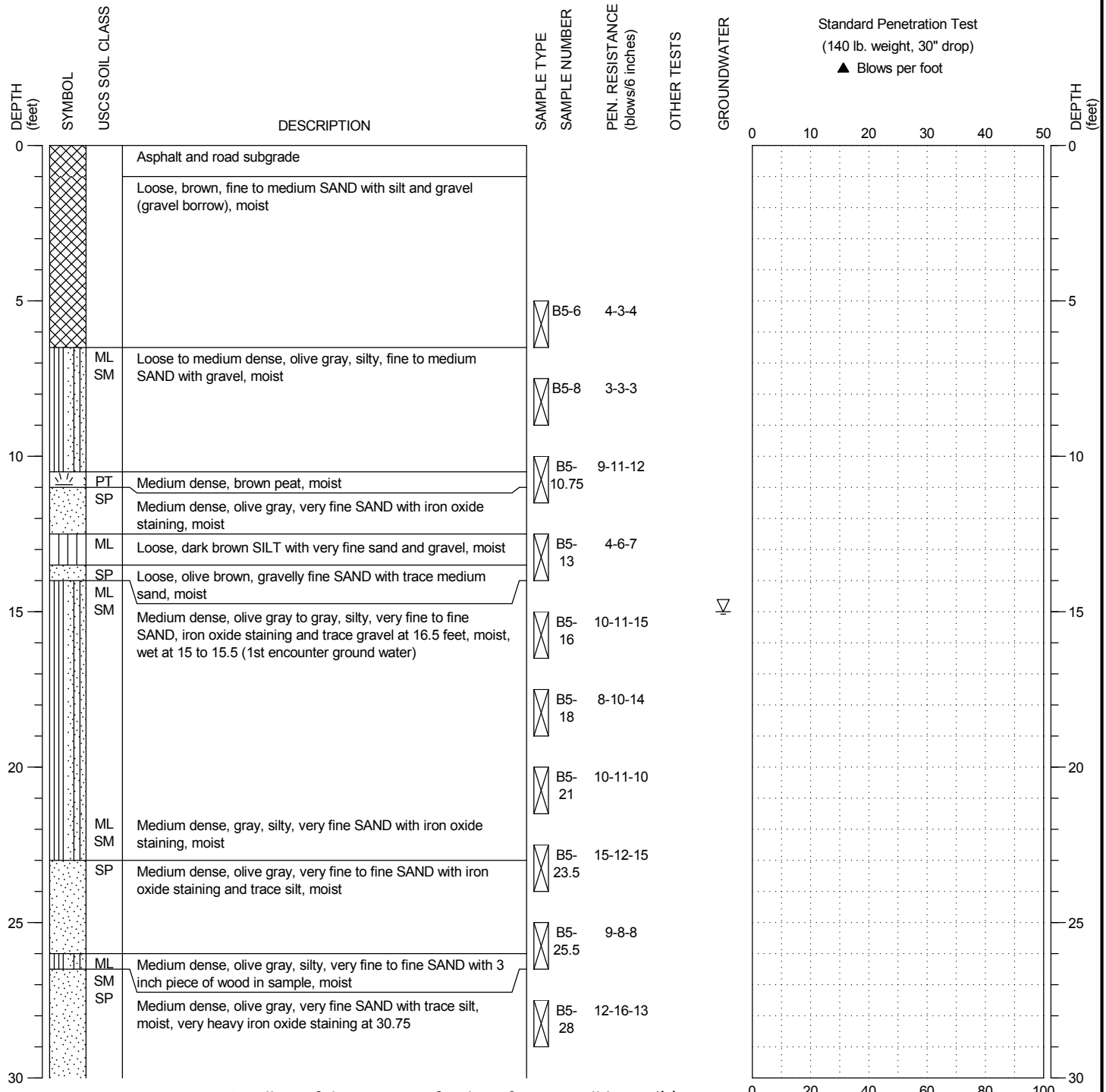
Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-4

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 35.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/22/2017
DATE COMPLETED: 3/21/2017
LOGGED BY: N. Kapise



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-5

PROJECT NO.: 2007-098-2045 FIGURE:

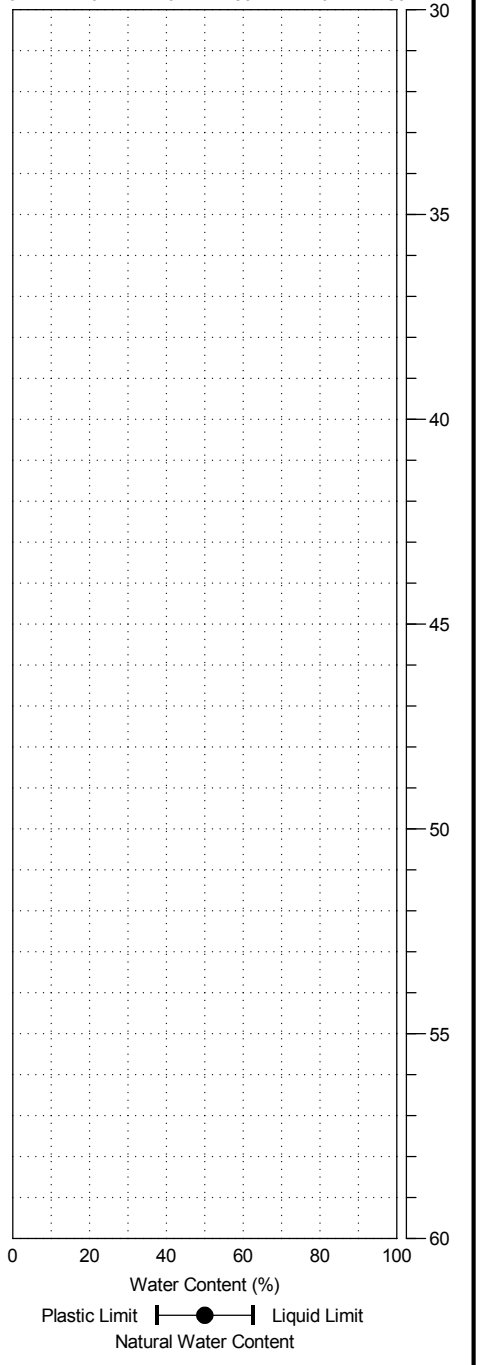
DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 35.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/22/2017
DATE COMPLETED: 3/21/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30								
		ML SM	Medium dense to very dense, olive gray, silty, very fine to fine SAND, 1 to 2 inch very fine sand lenses, and trace medium sand, moist, wet at approximately 32 feet (2nd encounter ground water) and 43 feet (3rd encounter ground water)		B5-31	16-15-21		
					B5-34	21-50 for 6		
35					B5-36	17-22-29		
					B5-38	30-50 for 6		
40					B5-40	50 for 6		
					B5-43	50 for 6		
45		SW	Very dense, olive gray fine to medium SAND with silt, moist to wet		B5-45.5	50 for 6		
50								
55								
60								

Exploration terminated at 45.5 feet. Ground water encountered at approximately 15, 32, and 43 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 10 to 20, 29 to 34, and 40 to 45 feet.

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-5

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 35.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/23/2017
DATE COMPLETED: 3/23/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
0			Grass and topsoil					
		ML SM	Loose, brown, silty, fine to medium SAND with gravel and organics, moist					
5		SP	Loose, olive gray, fine to medium SAND with gravel and silt, moist			4-4-6		
		ML SM	Loose, olive gray, silty, very fine to fine SAND with gravel and iron oxide staining, moist			6-6-5		
		ML SM	Loose, olive gray, silty, very fine to fine SAND with gravel and iron oxide staining, moist, wet at 9 feet (1st encounter ground water)					▽
10		SP	Loose, olive gray, very fine SAND with trace silt, iron oxide staining, moist		B6-11	5-6-7		
						5-5-5		
15		ML SM	Medium dense, olive gray, silty, very fine to fine SAND, moist, wet at 22 (2nd encounter ground water), approximately 2 inch fine to medium sand lenses from 15 to 17 feet and 23 feet, iron oxide staining at 22.5 to 24 feet			10-9-11		
						10-10-10		
20						9-12-12		
						12-14-15		
25		SP	Medium dense, olive gray, very fine to medium SAND with silt and iron oxide staining, moist		B6-25.5	15-14-17		
		ML SM	Medium dense, olive gray, silty, very fine to fine SAND with minimal iron oxide staining, lamination visible, moist			15-14-17		
30		ML	Medium dense, olive gray, silty, very fine to fine SAND with					

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 5 10 15 20 25 30

0 20 40 60 80 100

Water Content (%)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-6

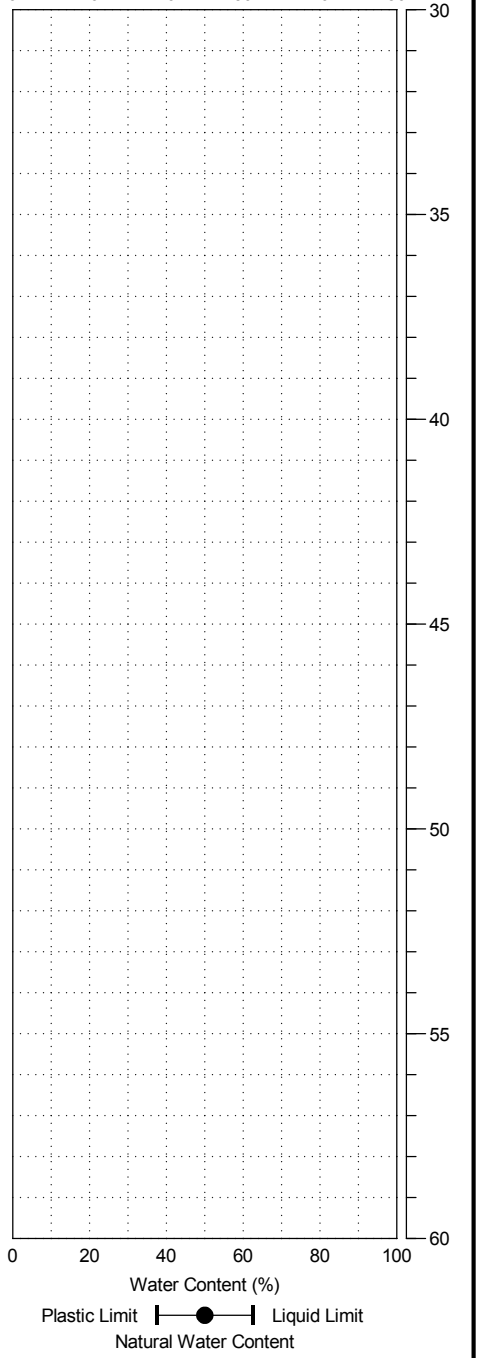
PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 35.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/23/2017
DATE COMPLETED: 3/23/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30		SM	iron oxide staining and visible lamination, moist, wet at approximately 36 feet			16-19-21		
						22-23-30		
35						19-25-25		
		SP	Medium dense, olive gray, fine to medium SAND with silt and trace coarse sand, wet at 36 feet (3rd encounter ground water)		B6-38	13-14-14		
		CL	Medium dense, olive gray, silty CLAY, moist					
		ML	Medium dense, olive gray SILT, moist					
40						17-19-21		
45			Exploration terminated at 41.5 feet. Ground water encountered at approximately 9, 22, and 36 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 7 to 12, 20 to 25, and 33 to 38 feet.					
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-6

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 36.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/24/2017
DATE COMPLETED: 3/23/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
0			Grass and topsoil					
		ML SM	Loose, yellow brown, silty, fine SAND, moist			4-4-5		
5		ML SM	Loose, olive gray, silty, very fine to fine SAND, iron oxide staining at 5 feet, moist, slightly wet from 9 to 11.5 feet			6-5-5		
						6-7-9		
10						6-5-5		
		ML SM	Loose to medium dense, olive gray, very fine SAND with silt, moist to slightly wet, trace coarse sand and slightly wetter from 15 to 16.5 feet, lenses of silty very fine to fine sand with iron oxide staining at approximately 18.5 to 19 feet and 20.75 to 21 feet			6-6-6		
15						5-8-8		▽
						8-8-10		
20					B7-20	13-12-12		
						10-9-11		
25						10-10-10		
		ML SM	Medium dense, olive gray, silty, fine SAND with iron oxide staining, wet at 28 feet (2nd encounter ground water)			12-12-13		
30								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 5 10 15 20 25 30

0 20 40 60 80 100

Water Content (%)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-7

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 36.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/24/2017
DATE COMPLETED: 3/23/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30		ML SM	Medium dense, olive gray, silty, very fine to fine SAND with iron oxide staining, moist, wet at 38 to 39 feet (3rd encounter ground water), lamination visible at 32.5 to 34 feet		B7-30.5	22-23-25		
						21-22-25		
35						19-19-19		
					B7-39	17-17-17		
40			Exploration terminated at 40 feet. Ground water encountered at approximately 17, 28, and 38 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 14 to 19, 25 to 30, and 35 to 40 feet.					
45								
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 20 40 60 80 100

Water Content (%)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

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HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-7

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 37.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/27/2017
DATE COMPLETED: 3/27/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
0			Loose, gray, gravelly, silty, fine to medium SAND, moist, petroleum odor noted					
			Loose, gray, gravelly SILT with fine to medium sand, wet at 5.5 feet (1st encounter ground water), petroleum odor noted					
5						2-2-3		
		PT	Loose, brown PEAT, moist					
		ML SM	Loose to medium dense, gray, silty, very fine to fine SAND, moist		B8-8	8-12-12		▽
10						5-7-9		
						12-21-28		
		SM	Medium dense, gray, gravelly, silty, fine to coarse SAND, wet					
15						17-20-20		
		ML SM	Medium dense, gray, gravelly, silty, very fine to fine SAND with trace medium to coarse sand, moist			19-20-23		
		ML SM	Medium dense, olive gray to olive brown, silty, very fine to fine SAND, moist					
20		ML SM	Medium dense, olive gray, silty, very fine to fine SAND with iron oxide staining and trace medium to coarse sand, moist, slightly wet at 23 feet (2nd encounter ground water), lamination visible from 30 to 34 feet			21-22-26		
						16-20-30		
25					B8-25	17-18-18		
						16-15-16		
30								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

0 20 40 60 80 100
Water Content (%)
Plastic Limit — Liquid Limit
Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-8

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 37.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/27/2017
DATE COMPLETED: 3/27/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30		ML SM	Medium dense, olive gray, silty, very fine to medium SAND with iron oxide staining, moist to slightly wet at 37 (3rd encounter ground water)			18-20-20		
						19-21-23		
35						22-23-27		
		ML	Medium dense, olive gray SILT with clay and very fine sand, moist to slightly wet		B8-38	19-27-30		
		ML SM	Medium dense to very dense, olive gray, silty, very fine to medium SAND with trace coarse sand and gravel, moist to slightly wet					
40						25-50 for 6		
45			Exploration terminated at 41.5 feet. Ground water encountered at approximately 5.5, 23, and 37 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 9 to 14, 23 to 28, and 35 to 40 feet.					
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

0 20 40 60 80 100
Water Content (%)
Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-8

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 34.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/23/2017
DATE COMPLETED: 3/22/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
0			Grass and topsoil					
		ML SM	Loose, brown, silty, fine to medium SAND with gravel and organics, moist					
		SP	Loose, olive gray, fine to medium SAND with silt and iron oxide staining, moist					
5					B9-6	5-5-5		
		ML SM	Loose to medium dense, olive gray, silty, very fine SAND with iron oxide staining, moist, wet at 18 feet (1st encounter ground water) and 31 feet (2nd encounter ground water), lenses of very fine to fine sand with silt at approximately 17.5 to 18.5 feet and 25.5 to 26.5 feet		B9-8	5-4-4		
10					B9-11	8-10-10		
					B9-13	8-9-9		
15					B9-16	10-10-10		
					B9-18	5-6-6		▽
20					B9-20	7-9-9		
					B9-24	5-6-8		
25					B9-26	12-15-15		
					B9-28	11-16-14		
30								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 5 10 15 20 25 30

0 20 40 60 80 100

Water Content (%)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-9

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 34.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/23/2017
DATE COMPLETED: 3/22/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30								
		ML SM	Medium dense to very dense, olive gray, silty, very fine to fine SAND with trace medium sand, moist, wet at 41 feet (3rd encounter ground water)		B9-30.5	15-13-15		
					B9-33	12-16-13		
35					B9-35.5	20-50 for 6		
					B9-38.5	20-21-24		
40					B9-41	21-21-21		
					B9-43	18-22-19		
		ML	Medium dense to very dense, olive gray SILT with iron oxide staining and trace very fine sand, moist		B9-45.25	50 for 6		
45								
50			Exploration terminated at 45.5 feet. Ground water encountered at approximately 18, 31, and 41 feet. No visual or olfactory signs of contamination in soil. Temporary wells screend from 15 to 20, 28 to 33, and 39 to 44 feet.					
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 20 40 60 80 100

Water Content (%)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-9

PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/20/2017
DATE COMPLETED: 3/20/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE / SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
0			Utility trench backfill				
		SP	Loose to medium dense, brown, fine to medium SAND with trace silt and gravel, moist	B10-3	7-9-10		
5				B10-6	10-10-10		
				B10-8	9-9-9		
		SW	Loose to medium dense, brown to olive brown, fine to coarse SAND with silt, wet at 10 feet (1st encounter ground water)	B10-11	8-12-9		▽
10		SP	Loose to medium dense, gray, fine to medium SAND with silt, moist	B10-13	8-10-10		
		ML SM	Loose, brown to olive gray, silty, very fine to fine SAND, wet	B10-15.5	9-10-9		
15		ML SM	Medium dense, brown to gray, silty, very fine to fine SAND, moist	B10-18	14-13-15		
		SP	Medium dense to dense, gray, fine to medium SAND with silt, moist to wet at 22 (2nd encounter ground water)	B10-20.5	15-15-15		
20				B10-23.5	19-50 for 6		
		SW	Medium dense, gray, fine to coarse SAND with gravel and trace silt and very fine sand, moist	B10-26	16-26-31		
25				B10-28	21-21-20		
		ML	Medium dense, gray, silty, very fine to fine SAND, moist				
30							

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 5 10 15 20 25 30

0 20 40 60 80 100

Water Content (%)

Plastic Limit ⊢●⊣ Liquid Limit
Natural Water Content

For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-10

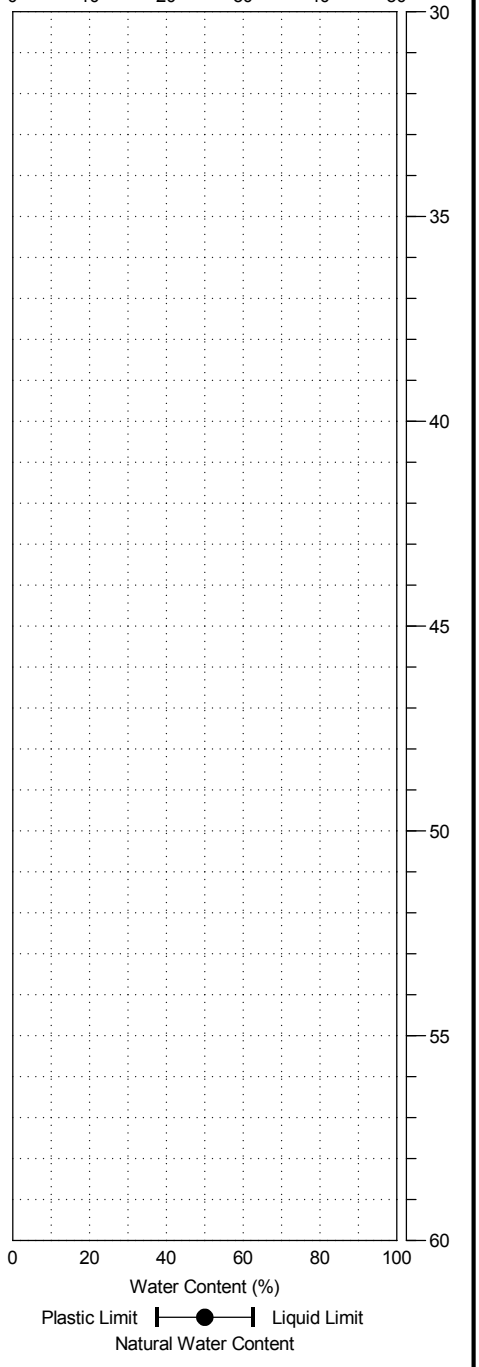
PROJECT NO.: 2007-098-2045 FIGURE:

DRILLING COMPANY: Cascade Drilling, Inc.
DRILLING METHOD:
SAMPLING METHOD: Hollow Stem Auger
SURFACE ELEVATION: 33.00 ± feet

LOCATION: Bothell, Washington
DATE STARTED: 3/20/2017
DATE COMPLETED: 3/20/2017
LOGGED BY: N. Kapise

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	OTHER TESTS	GROUNDWATER
30		SM			B10-30.5	19-29-39		
		SP	Medium dense, gray, fine to medium SAND with silt, moist		B10-33	21-24-20		
35		SP	Medium dense, gray, very fine to medium SAND with silt, wet at 36 feet (3rd encounter ground water)		B10-36	16-22-36		
		ML SM	Medium dense, gray, silty, very fine to fine SAND with trace medium sand, moist		B10-38	20-22-26		
40						27-21-26		
45			Exploration terminated at 41.5 feet. Ground water encountered at approximately 10.5, 22, and 36 feet. No visual or olfactory signs of contamination in soil. Temporary wells screened from 7 to 12, 22 to 27, and 35 to 40 feet.					
50								
55								
60								

Standard Penetration Test
(140 lb. weight, 30" drop)
▲ Blows per foot



For a proper understanding of the nature of subsurface conditions, this exploration log should be read in conjunction with the text of the geotechnical report.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Ultra/Riverside HVOC Site
Bothell, Washington

BORING:
UCCB-10

PROJECT NO.: 2007-098-2045 FIGURE:

APPENDIX B
LABORATORY REPORTS

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 27, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-188

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 21, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 20, 2017 and received by the laboratory on March 21, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-10.5-GW**					
Laboratory ID:	03-188-16					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Vinyl Chloride	0.20	0.20	EPA 8260C	3-22-17	3-22-17	
Bromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Iodomethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-22-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(cis) 1,2-Dichloroethene	3.1	0.20	EPA 8260C	3-22-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroform	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Trichloroethene	1.3	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-22-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-10.5-GW**					
Laboratory ID:	03-188-16					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Tetrachloroethene	1.1	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*96*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-22-GW**					
Laboratory ID:	03-188-17					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Iodomethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-22-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(cis) 1,2-Dichloroethene	9.0	0.20	EPA 8260C	3-22-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroform	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Trichloroethene	0.89	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-22-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188
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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-22-GW**					
Laboratory ID:	03-188-17					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*77-129*				
Toluene-d8	*97*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-36-GW**					
Laboratory ID:	03-188-18					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Iodomethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-22-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroform	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Trichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-22-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-36-GW**					
Laboratory ID:	03-188-18					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*77-129*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*96*	*80-125*				

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Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0322W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Iodomethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-22-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroform	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Trichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-22-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0322W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*106*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*91*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
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Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0322W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**11.5**	**11.2**	10.0	10.0	115	112	63-127	3	17	
Benzene	**11.0**	**11.1**	10.0	10.0	110	111	76-121	1	12	
Trichloroethene	**9.78**	**9.45**	10.0	10.0	98	95	64-114	3	15	
Toluene	**11.1**	**10.9**	10.0	10.0	111	109	82-115	2	13	
Chlorobenzene	**11.2**	**10.8**	10.0	10.0	112	108	80-115	4	14	
Surrogate:										
Dibromofluoromethane					*102*	*104*	*77-129*			
Toluene-d8					*101*	*100*	*80-127*			
4-Bromofluorobenzene					*95*	*98*	*80-125*			

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-188-19					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloromethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Iodomethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-23-17	3-23-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroform	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Trichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-23-17	3-23-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-188-19					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromoform	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Bromobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 21, 2017
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Project: 2007-098-T2045

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METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0323W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloromethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Iodomethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-23-17	3-23-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroform	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Trichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-23-17	3-23-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	

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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0323W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromoform	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Bromobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*96*	*80-125*				

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Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0323W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.8**	**10.7**	10.0	10.0	108	107	63-127	1	17	
Benzene	**10.6**	**10.8**	10.0	10.0	106	108	76-121	2	12	
Trichloroethene	**9.81**	**9.43**	10.0	10.0	98	94	64-114	4	15	
Toluene	**11.1**	**10.9**	10.0	10.0	111	109	82-115	2	13	
Chlorobenzene	**11.0**	**10.5**	10.0	10.0	110	105	80-115	5	14	
Surrogate:										
Dibromofluoromethane					*101*	*110*	*77-129*			
Toluene-d8					*99*	*99*	*80-127*			
4-Bromofluorobenzene					*94*	*97*	*80-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-188

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD					% Moisture
1	UCCB10-3.0	3/20/17	8:20	Soil	1																		X					
2	UCCB10-6.0		8:25		↓																		X					
3	UCCB10-8.0		8:40		↓																		X					
4	UCCB10-11.0		8:45		4																		X					
5	UCCB10-13.0		9:48		1																		X					
6	UCCB10-15.5		9:53		↓																		X					
7	UCCB10-18.0		10:08		↓																		X					
8	UCCB10-20.5		10:12		↓																		X					
9	UCCB10-23.5		10:22		4																		X					
10	UCCB10-26.0	↓	10:35	↓	1																		X					

	Signature	Company	Date	Time
Relinquished		HWA	3/21/17	11:27am
Received		ALPHA	3/21/17	11:27AM
Relinquished		ALPHA	3/21/17	12:14PM
Received		ORE	3/21/17	1214
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 3/23/17 BG
STA

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

Page 2 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-188

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
11	UCCB10-28.0	3/20/17	10:48	Soil	1																		X				
12	UCCB10-30.5		12:50																				X				
13	UCCB10-33.0		12:47																				X				
14	UCCB10-36.0		13:05		↓																		X				
15	UCCB10-38.0		13:10	↓	4																		X				
16	UCCB10-10.5-GW		9:25	GW	3						X																
17	UCCB10-22-GW		12:35	GW	|						X																
18	UCCB10-36-GW	↓	14:30	GW	↓						X																
19	TRIP BLANK	—	—	—	1						(X)																

	Signature	Company	Date	Time
Relinquished		HWA	3/21/17	11:27am
Received		ALPHA	3/21/17	11:27AM
Relinquished		ALPHA	3/21/17	12:14PM
Received		ORE	3/21/17	1214
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 31, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-188B

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 21, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188B
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 20, 2017 and received by the laboratory on March 21, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-11.0**					
Laboratory ID:	03-188-04					
Dichlorodifluoromethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB10-11.0**					
Laboratory ID:	03-188-04					
1,1,2-Trichloroethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.00088	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*73-134*				
Toluene-d8	*99*	*81-124*				
4-Bromofluorobenzene	*93*	*80-131*				

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*73-134*				
Toluene-d8	*110*	*81-124*				
4-Bromofluorobenzene	*109*	*80-131*				

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0330S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0512**	**0.0556**	0.0500	0.0500	102	111	66-127	8	15	
Benzene	**0.0557**	**0.0587**	0.0500	0.0500	111	117	76-122	5	15	
Trichloroethene	**0.0556**	**0.0538**	0.0500	0.0500	111	108	78-120	3	15	
Toluene	**0.0587**	**0.0591**	0.0500	0.0500	117	118	83-120	1	15	
Chlorobenzene	**0.0558**	**0.0573**	0.0500	0.0500	112	115	81-120	3	15	
Surrogate:										
Dibromofluoromethane					*112*	*110*	*73-134*			
Toluene-d8					*106*	*107*	*81-124*			
4-Bromofluorobenzene					*104*	*107*	*80-131*			

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-188B
Project: 2007-098-T2045

% MOISTURE

Date Analyzed: 3-30-17

Client ID	Lab ID	% Moisture
UCCB10-11.0	03-188-04	10

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kaplan

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-188

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	UCCB10-3.0	3/20/17	8:20	Soil	1																		X				
2	UCCB10-6.0		8:25																				X				
3	UCCB10-8.0		8:40		↓																		X				
4	UCCB10-11.0		8:45		4						O											X					O
5	UCCB10-13.0		9:48		1																		X				
6	UCCB10-15.5		9:53																				X				
7	UCCB10-18.0		10:08																				X				
8	UCCB10-20.5		10:12		↓																		X				
9	UCCB10-23.5		10:22		4																		X				
10	UCCB10-26.0	↓	10:35	↓	1																		X				

	Signature	Company	Date	Time
Relinquished	Nicole Kaplan	HWA	3/21/17	11:27am
Received	[signature]	ALPHA	3/21/17	11:27AM
Relinquished	[signature]	ALPHA	3/21/17	12:14PM
Received	[signature]	ORE	3/21/17	1214
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 3/23/17 BG STA
Added 3/30/17. DB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-188

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
11	UCCB10-28.0	3/20/17	10:48	Soil	1																		X				
12	UCCB10-30.5		12:50																				X				
13	UCCB10-33.0		12:47																				X				
14	UCCB10-36.0		13:05		↓																		X				
15	UCCB10-38.0		13:10	↓	4																		X				
16	UCCB10-10.5-GW		9:25	GW	3						X																
17	UCCB10-22-GW		12:35	GW	1						X																
18	UCCB10-36-GW	↓	14:30	GW	↓						X																
19	TRIP BLANK	—	—	—	1						(X)																

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		HWA	3/21/17	11:27am	
Received		ALPHA	3/21/17	11:27AM	
Relinquished		ALPHA	3/21/17	12:14PM	
Received		OSE	3/21/17	1214	
Relinquished					
Received					Data Package: Standard ☒ Level III ☐ Level IV ☐
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 24, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-196

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 21, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 21, 2017 and received by the laboratory on March 21, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-10-GW**					
Laboratory ID:	03-196-17					
Dichlorodifluoromethane	ND	0.28	EPA 8260C	3-3-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromomethane	ND	0.31	EPA 8260C	3-3-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Iodomethane	ND	1.4	EPA 8260C	3-3-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-3-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Chloroform	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Trichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-3-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-10-GW**					
Laboratory ID:	03-196-17					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*111*	*77-129*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*93*	*80-125*				

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-25-GW**					
Laboratory ID:	03-196-18					
Dichlorodifluoromethane	ND	0.28	EPA 8260C	3-3-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromomethane	ND	0.31	EPA 8260C	3-3-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Iodomethane	ND	1.4	EPA 8260C	3-3-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-3-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
(cis) 1,2-Dichloroethene	3.7	0.20	EPA 8260C	3-3-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Chloroform	0.43	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Trichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-3-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-25-GW**					
Laboratory ID:	03-196-18					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*77-129*				
Toluene-d8	*98*	*80-127*				
4-Bromofluorobenzene	*96*	*80-125*				

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-37-GW**					
Laboratory ID:	03-196-19					
Dichlorodifluoromethane	ND	0.28	EPA 8260C	3-3-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromomethane	ND	0.31	EPA 8260C	3-3-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Iodomethane	ND	1.4	EPA 8260C	3-3-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-3-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Chloroform	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Trichloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-3-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-3-17	3-22-17	

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-37-GW**					
Laboratory ID:	03-196-19					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-3-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-3-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-3-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-3-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*121*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*95*	*80-125*				

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0322W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloromethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Iodomethane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-22-17	3-22-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chloroform	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Trichloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromomethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-22-17	3-22-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-22-17	3-22-17	

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0322W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Bromoform	ND	1.0	EPA 8260C	3-22-17	3-22-17	
Bromobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-22-17	3-22-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-22-17	3-22-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-22-17	3-22-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*106*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*91*	*80-125*				

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0322W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**11.5**	**11.2**	10.0	10.0	115	112	63-127	3	17	
Benzene	**11.0**	**11.1**	10.0	10.0	110	111	76-121	1	12	
Trichloroethene	**9.78**	**9.45**	10.0	10.0	98	95	64-114	3	15	
Toluene	**11.1**	**10.9**	10.0	10.0	111	109	82-115	2	13	
Chlorobenzene	**11.2**	**10.8**	10.0	10.0	112	108	80-115	4	14	
Surrogate:										
Dibromofluoromethane					*102*	*104*	*77-129*			
Toluene-d8					*101*	*100*	*80-127*			
4-Bromofluorobenzene					*95*	*98*	*80-125*			

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-196-27					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloromethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Iodomethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-23-17	3-23-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroform	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Trichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-23-17	3-23-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-196-27					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromoform	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Bromobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*77-129*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0323W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloromethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Iodomethane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-23-17	3-23-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chloroform	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Trichloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromomethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-23-17	3-23-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-23-17	3-23-17	

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
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HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0323W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Bromoform	ND	1.0	EPA 8260C	3-23-17	3-23-17	
Bromobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-23-17	3-23-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-23-17	3-23-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-23-17	3-23-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*96*	*80-125*				

Date of Report: March 24, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0323W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.8**	**10.7**	10.0	10.0	108	107	63-127	1	17	
Benzene	**10.6**	**10.8**	10.0	10.0	106	108	76-121	2	12	
Trichloroethene	**9.81**	**9.43**	10.0	10.0	98	94	64-114	4	15	
Toluene	**11.1**	**10.9**	10.0	10.0	111	109	82-115	2	13	
Chlorobenzene	**11.0**	**10.5**	10.0	10.0	110	105	80-115	5	14	
Surrogate:										
Dibromofluoromethane					*101*	*110*	*77-129*			
Toluene-d8					*99*	*99*	*80-127*			
4-Bromofluorobenzene					*94*	*97*	*80-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC S&P
Project Manager: Arnie Sugar
Sampled by: Nicole Kapsa

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 03-196

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	UCB1-3.0	3/21/17	7:48	Soil	1																		X				
2	UCB1-6.0		7:50																								
3	UCB1-8.0		7:57		↓																						
4	UCB1-10.5		8:06		4																						
5	UCB1-13.5		8:15		1																						
6	UCB1-16.0		9:15																								
7	UCB1-18.5		9:22																								
8	UCB1-21.0		9:25																								
9	UCB1-23.0		9:32		↓																						
10	UCB1-25.5	↓	9:35	↓	4																		↓				

	Signature	Company	Date	Time
Relinquished	Nicole Kapsa	HWA	3/21/17	NIC 17:55
Received		CORE	3/21/17	1755
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

(X) Accrue 3/23/17 SIA

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Utra/Riverside HVAC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Rapze

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-196

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
11	UCCB1-28.0	3/21/17	9:43	Soil	1																		X				
12	UCCB1-31.0		10:57		1																						
13	UCCB1-33.5		11:02		1																						
14	UCCB1-35.0		11:07		1																						
15	UCCB1-37.5		11:13		1																						
16	UCCB1-40.0	↓	11:16	↓	4																		↓				
17	UCCB1-10-GW	3/21/17	9:00	GW	3						X																
18	UCCB1-25-GW		10:35								X																
19	UCCB1-37-GW	↓	12:00	↓	↓						X																
20	UCCB5-6.0	3/21/17	14:20	Soil	1																		X				

	Signature	Company	Date	Time
Relinquished	Nicole Rapze	HWA GeoSciences	3/21/17	17:55
Received			3/21/17	1755
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra / Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-196

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
21	VCCB5-8.0	3/21/17	14:28	Soil	1
22	VCCB5-10.75		14:35		1
23	VCCB5-13.0		14:42		1
24	VCCB5-16.0		14:50		4
25	VCCB5-18.0		15:44		1
26	VCCB5-21.0		15:48		1
27	Trip Blank				1

	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
21																		X				
22																		↓				
23																		↓				
24																		↓				
25																		↓				
26																		↓				
27						X												~~X~~				

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA GeoSciences	3/21/17	17:55
Received			3/21/17	1755
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 31, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-196B

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 21, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196B
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 21, 2017 and received by the laboratory on March 21, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-25.5**					
Laboratory ID:	03-196-10					
Dichlorodifluoromethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	0.0016	0.00096	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB1-25.5**					
Laboratory ID:	03-196-10					
1,1,2-Trichloroethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.00096	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*73-134*				
Toluene-d8	*110*	*81-124*				
4-Bromofluorobenzene	*103*	*80-131*				

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*119*	*73-134*				
Toluene-d8	*110*	*81-124*				
4-Bromofluorobenzene	*109*	*80-131*				

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0330S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0512**	**0.0556**	0.0500	0.0500	102	111	66-127	8	15	
Benzene	**0.0557**	**0.0587**	0.0500	0.0500	111	117	76-122	5	15	
Trichloroethene	**0.0556**	**0.0538**	0.0500	0.0500	111	108	78-120	3	15	
Toluene	**0.0587**	**0.0591**	0.0500	0.0500	117	118	83-120	1	15	
Chlorobenzene	**0.0558**	**0.0573**	0.0500	0.0500	112	115	81-120	3	15	
Surrogate:										
Dibromofluoromethane					*112*	*110*	*73-134*			
Toluene-d8					*106*	*107*	*81-124*			
4-Bromofluorobenzene					*104*	*107*	*80-131*			

Date of Report: March 31, 2017
Samples Submitted: March 21, 2017
Laboratory Reference: 1703-196B
Project: 2007-098-T2045

% MOISTURE

Date Analyzed: 3-30-17

Client ID	Lab ID	% Moisture
UCCB1-25.5	03-196-10	12

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapsa

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-196

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	VCCB1-3.0	3/21/17	7:48	Soil	1																		X				
2	VCCB1-6.0		7:50																								
3	VCCB1-8.0		7:57		↓																						
4	VCCB1-10.5		8:06		4																						
5	VCCB1-13.5		8:15		1																						
6	VCCB1-16.0		9:15		1																						
7	VCCB1-18.85		9:22		1																						
8	VCCB1-21.0		9:25		1																						
9	VCCB1-23.0		9:32		↓																						
10	VCCB1-25.5	↓	9:35	↓	4						G												PA				O

	Signature	Company	Date	Time
Relinquished	Nicole Kapsa	HWA GeoSciences	3/21/17	NK 17:55
Received			3/21/17	1755
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
⊗ Added 3/23/17 DB STA
○ Added 3/30/17. DB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Utra/Riverside HVAC Site
Project Manager: Arnie Soger
Sampled by: Nicole Rapze

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-196

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
11	UCCB1-28.0	3/21/17	9:43	Soil	1																		X				
12	UCCB1-31.0		10:57		1																						
13	UCCB1-33.5		11:02		1																						
14	UCCB1-35.0		11:07		1																						
15	UCCB1-37.5		11:13		1																						
16	UCCB1-40.0	↓	11:16	↓	4																		↓				
17	UCCB1-10-GW	3/21/17	9:00	GW	3						X																
18	UCCB1-25-GW		10:35		1						X																
19	UCCB1-37-GW	↓	12:00	↓	1						X																
20	UCCB5-6.0	3/21/17	14:20	Soil	1																		X				

	Signature	Company	Date	Time
Relinquished	Nicole Rapze	HWA GeoSciences	3/21/17	17:55
Received			3/21/17	1755
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-196

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
21	UCLB5-8.0	3/21/17	14:28	Soil	1
22	UCLB5-10.75		14:35		1
23	UCLB5-13.0		14:42		1
24	UCLB5-16.0		1450		4
25	UCLB5-18.0		15:44		1
26	UCLB5-21.0		15:48		1
27	Trip Blank				1

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
21																		X				
22																						
23																						
24																						
25																						
26																						
27						X												X				

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	3/21/17	17:55
Received		OSE	3/21/17	1755
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 4, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-207

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 22, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 22, 2017 and received by the laboratory on March 22, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C (soil) Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-15-GW**					
Laboratory ID:	03-207-11					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	1.1	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
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HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-15-GW**					
Laboratory ID:	03-207-11					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*77-129*				
Toluene-d8	*110*	*80-127*				
4-Bromofluorobenzene	*108*	*80-125*				

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-32-GW**					
Laboratory ID:	03-207-12					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	0.43	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-32-GW**					
Laboratory ID:	03-207-12					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	4.2	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*93*	*77-129*				
Toluene-d8	*113*	*80-127*				
4-Bromofluorobenzene	*109*	*80-125*				

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-43-GW**					
Laboratory ID:	03-207-13					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	1.6	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-43-GW**					
Laboratory ID:	03-207-13					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	1.5	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*77-129*				
Toluene-d8	*111*	*80-127*				
4-Bromofluorobenzene	*109*	*80-125*				

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-207-14					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-207-14					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*90*	*77-129*				
Toluene-d8	*112*	*80-127*				
4-Bromofluorobenzene	*112*	*80-125*				

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*93*	*77-129*				
Toluene-d8	*108*	*80-127*				
4-Bromofluorobenzene	*109*	*80-125*				

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0330W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.29**	**9.04**	10.0	10.0	83	90	63-127	9	17	
Benzene	**9.30**	**10.2**	10.0	10.0	93	102	76-121	9	12	
Trichloroethene	**8.64**	**9.71**	10.0	10.0	86	97	64-120	12	15	
Toluene	**10.1**	**11.4**	10.0	10.0	101	114	82-120	12	13	
Chlorobenzene	**9.28**	**10.2**	10.0	10.0	93	102	80-120	9	14	
Surrogate:										
Dibromofluoromethane					*94*	*91*	*77-129*			
Toluene-d8					*111*	*111*	*80-127*			
4-Bromofluorobenzene					*114*	*109*	*80-125*			

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-36.0**					
Laboratory ID:	03-207-06					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Chloromethane	ND	0.0057	EPA 8260C	4-3-17	4-3-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Bromomethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Chloroethane	ND	0.0057	EPA 8260C	4-3-17	4-3-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Iodomethane	ND	0.010	EPA 8260C	4-3-17	4-3-17	
Methylene Chloride	ND	0.0057	EPA 8260C	4-3-17	4-3-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Bromochloromethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Chloroform	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Trichloroethene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Dibromomethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
2-Chloroethyl Vinyl Ether	ND	0.0057	EPA 8260C	4-3-17	4-3-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB5-36.0**					
Laboratory ID:	03-207-06					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Chlorobenzene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Bromoform	ND	0.0057	EPA 8260C	4-3-17	4-3-17	
Bromobenzene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
1,2-Dibromo-3-chloropropane	ND	0.0057	EPA 8260C	4-3-17	4-3-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Hexachlorobutadiene	ND	0.0057	EPA 8260C	4-3-17	4-3-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	4-3-17	4-3-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*73-134*				
Toluene-d8	*108*	*81-124*				
4-Bromofluorobenzene	*109*	*80-131*				

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0403S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Chloromethane	ND	0.0050	EPA 8260C	4-3-17	4-3-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Bromomethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Chloroethane	ND	0.0050	EPA 8260C	4-3-17	4-3-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Iodomethane	ND	0.0091	EPA 8260C	4-3-17	4-3-17	
Methylene Chloride	ND	0.0050	EPA 8260C	4-3-17	4-3-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Bromochloromethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Chloroform	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Trichloroethene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Dibromomethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	4-3-17	4-3-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0403S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Chlorobenzene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Bromoform	ND	0.0050	EPA 8260C	4-3-17	4-3-17	
Bromobenzene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	4-3-17	4-3-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	4-3-17	4-3-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	4-3-17	4-3-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*73-134*				
Toluene-d8	*108*	*81-124*				
4-Bromofluorobenzene	*105*	*80-131*				

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0403S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0517**	**0.0488**	0.0500	0.0500	103	98	66-127	6	15	
Benzene	**0.0546**	**0.0534**	0.0500	0.0500	109	107	76-122	2	15	
Trichloroethene	**0.0575**	**0.0548**	0.0500	0.0500	115	110	78-120	5	15	
Toluene	**0.0593**	**0.0563**	0.0500	0.0500	119	113	83-120	5	15	
Chlorobenzene	**0.0529**	**0.0489**	0.0500	0.0500	106	98	81-120	8	15	
Surrogate:										
Dibromofluoromethane					*94*	*98*	*73-134*			
Toluene-d8					*102*	*105*	*81-124*			
4-Bromofluorobenzene					*105*	*103*	*80-131*			

Date of Report: April 4, 2017
Samples Submitted: March 22, 2017
Laboratory Reference: 1703-207
Project: 2007-098-T2045

% MOISTURE

Date Analyzed: 4-3-17

Client ID	Lab ID	% Moisture
UCCB5-36.0	03-207-06	20

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC
Project Manager: Annie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-207

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	UCCB5-23.5	3/22/17	8:26	Soil	1																						
2	UCCB5-25.5		8:31																								
3	UCCB5-28.0		8:38																								
4	UCCB5-31.0		8:44																								
5	UCCB5-34.0		8:51																								
6	UCCB5-36.0		10:15		4						O																O
7	UCCB5-38.0		10:30		1																						
8	UCCB5-40.0		10:33																								
9	UCCB5-43.0		10:40																								
10	UCCB5-45.5		10:42		4																						

	Signature	Company	Date	Time
Relinquished		HWA GeoSciences	3-22-17	1400
Received		Onsite	3-22-17	1400
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
⊗ Added 3/29/17. DB (3 day TAT)
○ Added 3/31/17. DB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

Page 2 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra / Riverside HVOC
Project Manager: Arnie Sagar
Sampled by: Nicole Kapsl

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
~~☒ Standard (7 Days)~~ (TPH analysis 5 Days) DJ
☐ _____ (other)

Laboratory Number: 03-207

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
11	VCCB5-15-GW	3/22/17	7:50	GW	3						X												
12	VCCB5-32-GW		9:48		3						X												
13	VCCB5-43-GW		11:40	↓	3						X												
14	Trip Blank		—	GW	1						X												

	Signature	Company	Date	Time
Relinquished		HWA GeoSciences	3-22-17	1400
Received		Onsite	3-22-17	1400
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 27, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-226

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 23, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 22, 2017 and received by the laboratory on March 23, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-18-GW**					
Laboratory ID:	03-226-18					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloromethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Iodomethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-24-17	3-24-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroform	1.2	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Trichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-24-17	3-24-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-18-GW**					
Laboratory ID:	03-226-18					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromoform	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Bromobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*77-129*				
Toluene-d8	*103*	*80-127*				
4-Bromofluorobenzene	*95*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-31-GW**					
Laboratory ID:	03-226-19					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloromethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Iodomethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-24-17	3-24-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroform	0.74	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Trichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-24-17	3-24-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-31-GW**					
Laboratory ID:	03-226-19					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Tetrachloroethene	0.61	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromoform	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Bromobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*118*	*77-129*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*95*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-226-20					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloromethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Iodomethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-24-17	3-24-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroform	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Trichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-24-17	3-24-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	03-226-20					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromoform	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Bromobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*112*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0324W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloromethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Iodomethane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-24-17	3-24-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chloroform	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Trichloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromomethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-24-17	3-24-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-24-17	3-24-17	

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0324W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Bromoform	ND	1.0	EPA 8260C	3-24-17	3-24-17	
Bromobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-24-17	3-24-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-24-17	3-24-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-24-17	3-24-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*77-129*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*95*	*80-125*				

Date of Report: March 27, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0324W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.8**	**10.9**	10.0	10.0	108	109	63-127	1	17	
Benzene	**10.6**	**11.1**	10.0	10.0	106	111	76-121	5	12	
Trichloroethene	**9.78**	**9.60**	10.0	10.0	98	96	64-120	2	15	
Toluene	**11.0**	**11.1**	10.0	10.0	110	111	82-120	1	13	
Chlorobenzene	**10.8**	**10.9**	10.0	10.0	108	109	80-120	1	14	
Surrogate:										
Dibromofluoromethane					*103*	*108*	*77-129*			
Toluene-d8					*100*	*100*	*80-127*			
4-Bromofluorobenzene					*94*	*95*	*80-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Rapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-226

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	VCCB9-6.0	3/22/17	13:45	Soil	1																		X				
2	VCCB9-8.0		13:51																								
3	VCCB9-11.0		13:55																								
4	VCCB9-13.0		14:00																								
5	VCCB9-16.0		14:05																								
6	VCCB9-18.0		14:09		↓																						
7	VCCB9-20.0		14:15		4																						
8	VCCB9-24.0		15:20		1																						
9	VCCB9-26.0		15:26																								
10	VCCB9-28.0	↓	15:31	↓	↓																		↓				

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Nicole Rapise	HWA	3/23/17	11:28AM	
Received	Diane Hjalmarson	SPEEDY	3-23-17	11:28A	
Relinquished	Diane Hjalmarson	SPEEDY	3-23-17	11:53A	
Received		CORE	3/23/17	1153	
Relinquished					
Received					Data Package: Standard ☐ Level III ☐ Level IV ☐
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

NK

Page 2 of 2

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra / Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-226

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
11	VCCB9-30.5	3/22/17	15:37	Soil	1																		X				
12	VCCB9-33.0		15:50		1																						
13	VCCB9-35.5		16:45		4																						
14	VCCB9-38.5		16:50		1																						
15	VCCB9-41.0		16:55		1																						
16	VCCB9-43.0		17:03		4																						
17	VCCB9-45.25		17:10		1																						
18	VCCB9-18-GW		15:00	GW	3						X																
19	VCCB9-~~XX~~31-GW		16:20		3						X																
20	Trip Blank	NK	—	W	1						X																

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	3/23/17	11:28AM
Received	Diane Njolstad	SPEEDY	3-23-17	11:28A
Relinquished	Diane Njolstad	SPEEDY	3-23-17	11:53A
Received		ORE	3/23/17	1153
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 3, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-226B

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 23, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 3, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226B
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 22, 2017 and received by the laboratory on March 23, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 3, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-35.5**					
Laboratory ID:	03-226-13					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	0.0059	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.0019	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	0.0059	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	0.014	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	0.0059	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	

Date of Report: April 3, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-35.5**					
Laboratory ID:	03-226-13					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	0.0059	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	0.0059	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.0059	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*73-134*				
Toluene-d8	*109*	*81-124*				
4-Bromofluorobenzene	*108*	*80-131*				

Date of Report: April 3, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.0016	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	0.012	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	

Date of Report: April 3, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*73-134*				
Toluene-d8	*108*	*81-124*				
4-Bromofluorobenzene	*108*	*80-131*				

Date of Report: April 3, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0331S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0526**	**0.0468**	0.0500	0.0500	105	94	66-127	12	15	
Benzene	**0.0562**	**0.0511**	0.0500	0.0500	112	102	76-122	10	15	
Trichloroethene	**0.0577**	**0.0533**	0.0500	0.0500	115	107	78-120	8	15	
Toluene	**0.0599**	**0.0550**	0.0500	0.0500	120	110	83-120	9	15	
Chlorobenzene	**0.0531**	**0.0499**	0.0500	0.0500	106	100	81-120	6	15	
Surrogate:										
Dibromofluoromethane					*93*	*93*	*73-134*			
Toluene-d8					*104*	*104*	*81-124*			
4-Bromofluorobenzene					*106*	*106*	*80-131*			

Date of Report: April 3, 2017
Samples Submitted: March 23, 2017
Laboratory Reference: 1703-226B
Project: 2007-098-T2045

% MOISTURE

Date Analyzed: 3-30-17

Client ID	Lab ID	% Moisture
UCCB9-35.5	03-226-13	21

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Rapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-226

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	VCCB9-6.0	3/22/17	13:45	Soil	1																		X				
2	VCCB9-8.0		13:51																								
3	VCCB9-11.0		13:55																								
4	VCCB9-13.0		14:00																								
5	VCCB9-16.0		14:05																								
6	VCCB9-18.0		14:09		↓																						
7	VCCB9-20.0		14:15		4																						
8	VCCB9-24.0		15:20		1																						
9	VCCB9-26.0		15:26		1																						
10	VCCB9-28.0	↓	15:31	↓	↓																		↓				

	Signature	Company	Date	Time
Relinquished	Nicole Rapise	HWA	3/23/17	11:28AM
Received	Diane Hjalmarson	SPEEDY	3-23-17	11:28A
Relinquished	Diane Hjalmarson	SPEEDY	3-23-17	11:53A
Received		CORE	3/23/17	1153
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
⊗ Added 3/30/17. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

NK

Page 2 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra / Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-226

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
11	VCCB9-30.5	3/22/17	15:37	Soil	1																		X				
12	VCCB9-33.0		15:50		↓																						
13	VCCB9-35.5		16:45		4						⊗												—				⊗
14	VCCB9-38.5		16:50		1																						
15	VCCB9-41.0		16:55		1																						
16	VCCB9-43.0		17:03		4																						
17	VCCB9-45.25	↓	17:10	↓	1																		↓				
18	VCCB9-18-GW		15:00	GW	3						X																
19	VCCB9-~~NK~~31-GW		16:20		3						X																
20	Trip Blank	NK	—	W	1						X																

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Nicole Kapise	HWA	3/23/17	11:28AM	
Received	Diane Nalatek	SPEEDY	3-23-17	11:28A	
Relinquished	Diane Nalatek	SPEEDY	3-23-17	11:53A	
Received		ONE	3/23/17	1153	
Relinquished					
Received					Data Package: Standard ☐ Level III ☐ Level IV ☐
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 28, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-244

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 24, 2017.

Please note that this is a *revised* report, and replaces the original due to a revision of the sample identification for sample UCCB9-31-GW, which was changed to UCCB9-41-GW.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 23, 2017 and received by the laboratory on March 24, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-41-GW**					
Laboratory ID:	03-244-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	5.7	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	0.23	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB9-41-GW**					
Laboratory ID:	03-244-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*77-129*				
Toluene-d8	*110*	*80-127*				
4-Bromofluorobenzene	*110*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-9-GW**					
Laboratory ID:	03-244-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-9-GW**					
Laboratory ID:	03-244-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*77-129*				
Toluene-d8	*112*	*80-127*				
4-Bromofluorobenzene	*109*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-22-GW**					
Laboratory ID:	03-244-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	1.4	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-22-GW**					
Laboratory ID:	03-244-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*77-129*				
Toluene-d8	*114*	*80-127*				
4-Bromofluorobenzene	*107*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-36-GW**					
Laboratory ID:	03-244-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	1.8	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-36-GW**					
Laboratory ID:	03-244-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*77-129*				
Toluene-d8	*114*	*80-127*				
4-Bromofluorobenzene	*109*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-17-GW**					
Laboratory ID:	03-244-11					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	0.27	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-17-GW**					
Laboratory ID:	03-244-11					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*77-129*				
Toluene-d8	*112*	*80-127*				
4-Bromofluorobenzene	*108*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-28-GW**					
Laboratory ID:	03-244-12					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	2.3	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-28-GW**					
Laboratory ID:	03-244-12					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*77-129*				
Toluene-d8	*107*	*80-127*				
4-Bromofluorobenzene	*105*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-38-GW**					
Laboratory ID:	03-244-13					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	2.1	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-38-GW**					
Laboratory ID:	03-244-13					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*77-129*				
Toluene-d8	*110*	*80-127*				
4-Bromofluorobenzene	*112*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP 1**					
Laboratory ID:	03-244-14					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	1.6	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP 1**					
Laboratory ID:	03-244-14					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*98*	*77-129*				
Toluene-d8	*113*	*80-127*				
4-Bromofluorobenzene	*110*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	03-244-15					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	03-244-15					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*77-129*				
Toluene-d8	*111*	*80-127*				
4-Bromofluorobenzene	*109*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0327W2					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0327W2					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.4	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*77-129*				
Toluene-d8	*113*	*80-127*				
4-Bromofluorobenzene	*111*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0327W2									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.09**	**9.93**	10.0	10.0	91	99	63-127	9	17	
Benzene	**9.90**	**10.8**	10.0	10.0	99	108	76-121	9	12	
Trichloroethene	**9.37**	**9.91**	10.0	10.0	94	99	64-120	6	15	
Toluene	**10.9**	**11.5**	10.0	10.0	109	115	82-120	5	13	
Chlorobenzene	**10.0**	**10.8**	10.0	10.0	100	108	80-120	8	14	
Surrogate:										
Dibromofluoromethane					*97*	*96*	*77-129*			
Toluene-d8					*111*	*107*	*80-127*			
4-Bromofluorobenzene					*111*	*109*	*80-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 1007-098-T2045
Project Name: Ultra/Riverside HVOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kaplan

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-244

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	~~UCCB9-31-DB~~ UCCB9-GW	3/23/17	~~9:35~~	GW	3						X																
2	UCCB6-11.0		9:36	Soil	4																	X					
3	UCCB6-25.5		11:01	↓	↓						⊗											~~X~~ DB					⊗
4	UCCB6-38.0		12:45	↓	↓																	X					
5	UCCB6-9-GW		10:34	GW	3						X																
6	UCCB6-22-GW		11:25	↓	3						X																
7	UCCB6-36-GW		13:53	↓	3						X																
8	UCCB7-20.0		16:20	Soil	4						⊗											~~X~~ DB					⊗
9	UCCB7-30.5		17:15	↓	↓																	X					
10	UCCB7-39.0	↓	17:30	↓	↓																	X					

	Signature	Company	Date	Time
Relinquished	Nicole Kaplan	HWA	3/24/17	10:35am
Received	Diane Hyatt	SPEEDY	3-24-17	10:35A
Relinquished	Diane Hyatt	SPEEDY	3-24-17	11AM
Received		CORE	3/24/17	1100
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
⊗ Added 3/30/17. DB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-244

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
11	VCCB7-17-GW	3/23/17	16:05	GW	3						X												
12	VCCB7-28-GW	↓	16:58	↓	↓						X												
13	VCCB7-38-GW	↓	17:52	↓	↓						X												
14	DUP 1	↓	11:30	↓	↓						X												
15	TRIP BLANK				1						X												

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	3/24/17	10:35 AM
Received	Diane Hjalseth	SPEEDY	3-24-17	10:35
Relinquished	Diane Hjalseth	SPEEDY	3-24-17	11 AM
Received		OBE	3/24/17	1100
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 3, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-244B

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 24, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 23, 2017 and received by the laboratory on March 24, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-25.5**					
Laboratory ID:	03-244-03					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	0.0062	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.0020	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	0.0062	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	0.015	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	0.0062	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	0.0062	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB6-25.5**					
Laboratory ID:	03-244-03					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	0.0062	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*73-134*				
Toluene-d8	*108*	*81-124*				
4-Bromofluorobenzene	*106*	*80-131*				

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-20.0**					
Laboratory ID:	03-244-08					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	0.0061	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.0019	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	0.0061	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	0.015	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	0.0061	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	0.0061	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB7-20.0**					
Laboratory ID:	03-244-08					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	0.0061	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	0.0061	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.0061	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*73-134*				
Toluene-d8	*114*	*81-124*				
4-Bromofluorobenzene	*112*	*80-131*				

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.0016	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	0.012	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*73-134*				
Toluene-d8	*108*	*81-124*				
4-Bromofluorobenzene	*108*	*80-131*				

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0331S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0526**	**0.0468**	0.0500	0.0500	105	94	66-127	12	15	
Benzene	**0.0562**	**0.0511**	0.0500	0.0500	112	102	76-122	10	15	
Trichloroethene	**0.0577**	**0.0533**	0.0500	0.0500	115	107	78-120	8	15	
Toluene	**0.0599**	**0.0550**	0.0500	0.0500	120	110	83-120	9	15	
Chlorobenzene	**0.0531**	**0.0499**	0.0500	0.0500	106	100	81-120	6	15	
Surrogate:										
Dibromofluoromethane					*93*	*93*	*73-134*			
Toluene-d8					*104*	*104*	*81-124*			
4-Bromofluorobenzene					*106*	*106*	*80-131*			

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-244B
Project: 2007-098-T2045

% MOISTURE

Date Analyzed: 3-30-17

Client ID	Lab ID	% Moisture
UCCB6-25.5	03-244-03	21
UCCB7-20.0	03-244-08	18

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 1007-098-T2045
Project Name: Ultra/Riverside HVOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kaplan

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-244

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	VCCB9-~~31~~ 41-GW	3/23/17	~~9:35~~ *	GW	3						X																
2	VCCB6-11.0		9:36	Soil	4																	X					
3	VCCB6-25.5		11:01	↓	1						⊗											X	**				⊗
4	VCCB6-38.0		12:45	↓	↓																	X					
5	VCCB6-9-GW		10:34	GW	3						X																
6	VCCB6-22-GW		11:25	↓	3						X																
7	VCCB6-36-GW		13:53	↓	3						X																
8	VCCB7-20.0		16:20	Soil	4						⊗											X	DB				⊗
9	VCCB7-30.5		17:15	↓	↓																	X					
10	VCCB7-39.0	↓	17:30	↓	↓																	X					

	Signature	Company	Date	Time
Relinquished	Nicole Kaplan	HWA	3/24/17	10:35am
Received	Diane Hyatt	SPEEDY	3-24-17	10:35A
Relinquished	Diane Hyatt	SPEEDY	3-24-17	11AM
Received		CESE	3/24/17	1100
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
⊗ Added 3/30/17. DB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-244

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
11	UCCB7-17-GW	3/23/17	16:05	GW	3						X																
12	UCCB7-28-GW	↓	16:58	↓	↓						X																
13	UCCB7-38-GW		17:52								X																
14	DUP 1	↓	11:30	↓	↓						X																
15	TRIP BLANK				1						X																

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	3/24/17	10:35 AM
Received	Diane Hjalseth	SPEEDY	3-24-17	10:35
Relinquished	Diane Hjalseth	SPEEDY	3-24-17	11 AM
Received		OSE	3/24/17	1100
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

March 28, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-245

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 24, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 24, 2017 and received by the laboratory on March 24, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-4-GW**					
Laboratory ID:	03-245-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-4-GW**					
Laboratory ID:	03-245-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*120*	*77-129*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-27-GW**					
Laboratory ID:	03-245-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-27-GW**					
Laboratory ID:	03-245-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	4.1	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*117*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*93*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-38-GW**					
Laboratory ID:	03-245-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-38-GW**					
Laboratory ID:	03-245-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	0.45	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*118*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*91*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	03-245-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	03-245-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*115*	*77-129*				
Toluene-d8	*102*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0327W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloromethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Iodomethane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-27-17	3-27-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chloroform	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Trichloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromomethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	3-27-17	3-27-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-27-17	3-27-17	

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0327W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Bromoform	ND	1.0	EPA 8260C	3-27-17	3-27-17	
Bromobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-27-17	3-27-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-27-17	3-27-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-27-17	3-27-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*117*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: March 28, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0327W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.9**	**10.6**	10.0	10.0	109	106	63-127	3	17	
Benzene	**10.7**	**10.6**	10.0	10.0	107	106	76-121	1	12	
Trichloroethene	**9.90**	**9.58**	10.0	10.0	99	96	64-120	3	15	
Toluene	**10.9**	**10.9**	10.0	10.0	109	109	82-120	0	13	
Chlorobenzene	**10.6**	**10.5**	10.0	10.0	106	105	80-120	1	14	
Surrogate:										
Dibromofluoromethane					*111*	*107*	*77-129*			
Toluene-d8					*99*	*98*	*80-127*			
4-Bromofluorobenzene					*95*	*94*	*80-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVOC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-245

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	UCCB3-5.0	3/24/17	9:25	Soil	4																		
2	UCCB3-32.5	↑	12:05	↓	1																		
3	UCCB3-39.0		12:27		1																		
4	UCCB3-4-GW		9:00	GW	3						X												
5	UCCB3-27-GW		11:30		3						X												
6	UCCB3-38-GW	↓	12:45	↓	1						X												
7	Trip Blank				1						X												

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	3/24/17	1300
Received	Van	Spdy	3.24.17	1310
Relinquished	Van	Spdy	3.24.17	1330
Received		CCS23	3/24/17	1330
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 3, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1703-245B

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 24, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245B
Project: 2007-098-T2045

Case Narrative

Samples were collected on March 24, 2017 and received by the laboratory on March 24, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-32.5**					
Laboratory ID:	03-245-02					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	0.0055	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.0018	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	0.0055	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	0.013	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	0.0055	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB3-32.5**					
Laboratory ID:	03-245-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	0.0015	0.0011	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	0.0055	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*73-134*				
Toluene-d8	*109*	*81-124*				
4-Bromofluorobenzene	*108*	*80-131*				

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.0016	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	0.012	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*73-134*				
Toluene-d8	*108*	*81-124*				
4-Bromofluorobenzene	*108*	*80-131*				

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0331S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0526**	**0.0468**	0.0500	0.0500	105	94	66-127	12	15	
Benzene	**0.0562**	**0.0511**	0.0500	0.0500	112	102	76-122	10	15	
Trichloroethene	**0.0577**	**0.0533**	0.0500	0.0500	115	107	78-120	8	15	
Toluene	**0.0599**	**0.0550**	0.0500	0.0500	120	110	83-120	9	15	
Chlorobenzene	**0.0531**	**0.0499**	0.0500	0.0500	106	100	81-120	6	15	
Surrogate:										
Dibromofluoromethane					*93*	*93*	*73-134*			
Toluene-d8					*104*	*104*	*81-124*			
4-Bromofluorobenzene					*106*	*106*	*80-131*			

Date of Report: April 3, 2017
Samples Submitted: March 24, 2017
Laboratory Reference: 1703-245B
Project: 2007-098-T2045

% MOISTURE

Date Analyzed: 3-30-17

Client ID	Lab ID	% Moisture
UCCB3-32.5	03-245-02	20

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra/Riverside HVAC Site
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-245

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	VCCB3-5.0	3/24/17	9:25	Soil	4																						
2	VCCB3-32.5	↑	12:05	↓	1						X																X
3	VCCB3-39.0		12:27		↓																						
4	VCCB3-4-GW		9:00	GW	3						X																
5	VCCB3-27-GW		11:30		3						X																
6	VCCB3-38-GW	↓	12:45	↓	↓						X																
7	Trip Blank				1						X																

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	3/24/17	1300
Received	Van	Spdy	3.24.17	1310
Relinquished	Van	Spdy	3.24.17	1330
Received			3/24/17	1330
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
X Added 3/30/17. JB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 5, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098 T2045
Laboratory Reference No. 1703-260

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on March 27, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

Case Narrative

Samples were collected on March 27, 2017 and received by the laboratory on March 27, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C (soil) Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB8-23-GW**					
Laboratory ID:	03-260-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	0.55	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	1.2	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	0.22	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB8-23-GW**					
Laboratory ID:	03-260-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	64	0.40	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*91*	*77-129*				
Toluene-d8	*109*	*80-127*				
4-Bromofluorobenzene	*110*	*80-125*				

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB8-37-GW**					
Laboratory ID:	03-260-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	0.25	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	0.66	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB8-37-GW**					
Laboratory ID:	03-260-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	21	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*77-129*				
Toluene-d8	*112*	*80-127*				
4-Bromofluorobenzene	*110*	*80-125*				

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	03-260-07					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	03-260-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*77-129*				
Toluene-d8	*112*	*80-127*				
4-Bromofluorobenzene	*113*	*80-125*				

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
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HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloromethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Iodomethane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chloroform	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Trichloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromomethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-30-17	3-30-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-30-17	3-30-17	

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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0330W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Bromoform	ND	1.0	EPA 8260C	3-30-17	3-30-17	
Bromobenzene	ND	0.26	EPA 8260C	3-30-17	3-30-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-30-17	3-30-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
4-Chlorotoluene	ND	0.25	EPA 8260C	3-30-17	3-30-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-30-17	3-30-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-30-17	3-30-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*93*	*77-129*				
Toluene-d8	*108*	*80-127*				
4-Bromofluorobenzene	*109*	*80-125*				

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
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Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Chloromethane	ND	1.0	EPA 8260C	3-31-17	3-31-17	
Vinyl Chloride	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Bromomethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Chloroethane	ND	1.0	EPA 8260C	3-31-17	3-31-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Iodomethane	ND	1.0	EPA 8260C	3-31-17	3-31-17	
Methylene Chloride	ND	1.0	EPA 8260C	3-31-17	3-31-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Bromochloromethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Chloroform	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Trichloroethene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Dibromomethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Bromodichloromethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-31-17	3-31-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-31-17	3-31-17	

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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0331W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Tetrachloroethene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Dibromochloromethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Chlorobenzene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Bromoform	ND	1.0	EPA 8260C	3-31-17	3-31-17	
Bromobenzene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-31-17	3-31-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-31-17	3-31-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-31-17	3-31-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*94*	*80-125*				

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0330W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.29**	**9.04**	10.0	10.0	83	90	63-127	9	17	
Benzene	**9.30**	**10.2**	10.0	10.0	93	102	76-121	9	12	
Trichloroethene	**8.64**	**9.71**	10.0	10.0	86	97	64-120	12	15	
Toluene	**10.1**	**11.4**	10.0	10.0	101	114	82-120	12	13	
Chlorobenzene	**9.28**	**10.2**	10.0	10.0	93	102	80-120	9	14	
Surrogate:										
Dibromofluoromethane					*94*	*91*	*77-129*			
Toluene-d8					*111*	*111*	*80-127*			
4-Bromofluorobenzene					*114*	*109*	*80-125*			

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0331W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.54**	**9.47**	10.0	10.0	95	95	63-127	1	17	
Benzene	**10.0**	**10.0**	10.0	10.0	100	100	76-121	0	12	
Trichloroethene	**9.86**	**9.77**	10.0	10.0	99	98	64-120	1	15	
Toluene	**10.3**	**10.4**	10.0	10.0	103	104	82-120	1	13	
Chlorobenzene	**10.3**	**10.3**	10.0	10.0	103	103	80-120	0	14	
Surrogate:										
Dibromofluoromethane					*97*	*102*	*77-129*			
Toluene-d8					*100*	*100*	*80-127*			
4-Bromofluorobenzene					*94*	*94*	*80-125*			

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Samples Submitted: March 27, 2017
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HALOGENATED VOLATILES EPA 8260C
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB8-25.0**					
Laboratory ID:	03-260-02					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Chloromethane	ND	0.0056	EPA 8260C	4-4-17	4-5-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Bromomethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Chloroethane	ND	0.0056	EPA 8260C	4-4-17	4-5-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Iodomethane	ND	0.0074	EPA 8260C	4-4-17	4-5-17	
Methylene Chloride	ND	0.0074	EPA 8260C	4-4-17	4-5-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Bromochloromethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Chloroform	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Trichloroethene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Dibromomethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
2-Chloroethyl Vinyl Ether	ND	0.0056	EPA 8260C	4-4-17	4-5-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	

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Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB8-25.0**					
Laboratory ID:	03-260-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Tetrachloroethene	0.025	0.0011	EPA 8260C	4-4-17	4-5-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Chlorobenzene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Bromoform	ND	0.0056	EPA 8260C	4-4-17	4-5-17	
Bromobenzene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
1,2-Dibromo-3-chloropropane	ND	0.0056	EPA 8260C	4-4-17	4-5-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Hexachlorobutadiene	ND	0.0056	EPA 8260C	4-4-17	4-5-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	4-4-17	4-5-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*73-134*				
Toluene-d8	*103*	*81-124*				
4-Bromofluorobenzene	*107*	*80-131*				

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0404S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Chloromethane	ND	0.0050	EPA 8260C	4-4-17	4-5-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Bromomethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Chloroethane	ND	0.0050	EPA 8260C	4-4-17	4-5-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Iodomethane	ND	0.0066	EPA 8260C	4-4-17	4-5-17	
Methylene Chloride	ND	0.0066	EPA 8260C	4-4-17	4-5-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Bromochloromethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Chloroform	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Trichloroethene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Dibromomethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	4-4-17	4-5-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0404S2					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Chlorobenzene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Bromoform	ND	0.0050	EPA 8260C	4-4-17	4-5-17	
Bromobenzene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	4-4-17	4-5-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	4-4-17	4-5-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	4-4-17	4-5-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*73-134*				
Toluene-d8	*95*	*81-124*				
4-Bromofluorobenzene	*96*	*80-131*				

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0404S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0441**	**0.0419**	0.0500	0.0500	88	84	66-127	5	15	
Benzene	**0.0488**	**0.0489**	0.0500	0.0500	98	98	76-122	0	15	
Trichloroethene	**0.0513**	**0.0496**	0.0500	0.0500	103	99	78-120	3	15	
Toluene	**0.0506**	**0.0501**	0.0500	0.0500	101	100	83-120	1	15	
Chlorobenzene	**0.0484**	**0.0492**	0.0500	0.0500	97	98	81-120	2	15	
Surrogate:										
Dibromofluoromethane					*100*	*100*	*73-134*			
Toluene-d8					*101*	*99*	*81-124*			
4-Bromofluorobenzene					*98*	*103*	*80-131*			

Date of Report: April 5, 2017
Samples Submitted: March 27, 2017
Laboratory Reference: 1703-260
Project: 2007-098 T2045

% MOISTURE

Date Analyzed: 4-4-17

Client ID	Lab ID	% Moisture
UCCB8-25.0	03-260-02	18

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 1

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: T2045
Project Name: Ultra/Riverside HVOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 03-260

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	VCCB8-8.0	3/27/17	7:40	Soil	4
2	VCCB8-25.0		9:25		
3	VCCB8-38.0		10:30		
4	VCCB8-5.5-GW		8:00	GW	3
5	VCCB8-23-GW		9:40		
6	VCCB8-37-GW		11:20		
7	Trip Blank	—	—	W	1

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1																		X				
2						⊗												X				⊗
3																		X				
4																		X				
5						X																
6						X																
7						X																

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	3/27/17	15:25
Received		GSE	3/27/17	1525
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
⊗ Added 4/4/17. DB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 12, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1704-060

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on April 6, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

Case Narrative

Samples were collected on April 5, 2017 and received by the laboratory on April 6, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-9.0-GW**					
Laboratory ID:	04-060-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	0.37	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-9.0-GW**					
Laboratory ID:	04-060-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	2.6	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*77-129*				
Toluene-d8	*104*	*80-127*				
4-Bromofluorobenzene	*102*	*80-125*				

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-25.0-GW**					
Laboratory ID:	04-060-05					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-25.0-GW**					
Laboratory ID:	04-060-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	35	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*98*	*80-125*				

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-37.0-GW**					
Laboratory ID:	04-060-06					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	0.41	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	0.48	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-37.0-GW**					
Laboratory ID:	04-060-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	21	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*99*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-9.5-GW**					
Laboratory ID:	04-060-10					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-9.5-GW**					
Laboratory ID:	04-060-10					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*99*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-21.0-GW**					
Laboratory ID:	04-060-11					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-21.0-GW**					
Laboratory ID:	04-060-11					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	14	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*100*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-35.5-GW**					
Laboratory ID:	04-060-12					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-35.5-GW**					
Laboratory ID:	04-060-12					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	9.3	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*77-129*				
Toluene-d8	*101*	*80-127*				
4-Bromofluorobenzene	*99*	*80-125*				

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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	04-060-13					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Trip Blank**					
Laboratory ID:	04-060-13					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*97*	*80-125*				

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Dup-2**					
Laboratory ID:	04-060-14					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**Dup-2**					
Laboratory ID:	04-060-14					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*77-129*				
Toluene-d8	*99*	*80-127*				
4-Bromofluorobenzene	*98*	*80-125*				

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0407W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloromethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Vinyl Chloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroethane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Iodomethane	ND	1.4	EPA 8260C	4-7-17	4-7-17	
Methylene Chloride	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chloroform	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Trichloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromomethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromodichloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	4-7-17	4-7-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	4-7-17	4-7-17	

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0407W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Tetrachloroethene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Dibromochloromethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Chlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Bromoform	ND	1.0	EPA 8260C	4-7-17	4-7-17	
Bromobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	4-7-17	4-7-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	4-7-17	4-7-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	4-7-17	4-7-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*77-129*				
Toluene-d8	*100*	*80-127*				
4-Bromofluorobenzene	*98*	*80-125*				

Date of Report: April 12, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0407W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.74**	**9.49**	10.0	10.0	87	95	63-127	8	17	
Benzene	**9.75**	**10.4**	10.0	10.0	98	104	76-121	6	12	
Trichloroethene	**9.09**	**9.56**	10.0	10.0	91	96	64-120	5	15	
Toluene	**9.85**	**10.6**	10.0	10.0	99	106	82-120	7	13	
Chlorobenzene	**9.78**	**10.6**	10.0	10.0	98	106	80-120	8	14	
Surrogate:										
Dibromofluoromethane					*100*	*100*	*77-129*			
Toluene-d8					*98*	*98*	*80-127*			
4-Bromofluorobenzene					*96*	*99*	*80-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 04-060

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra Custom Cleaners / Riverside HVOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HVOCs				% Moisture
1	VCCB2-9.5	4/5/17	7:55	Soil	4																						
2	VCCB2-27.5		8:45		1																						
3	VCCB2-38.0		9:45		1																						
4	VCCB2-9.0-GW		8:05	GW	3																	X					
5	VCCB2-25.0-GW		9:10		1																	X					
6	VCCB2-37.0-GW		10:50		1																	X					
7	VCCB4-10.5		12:30	Soil	4																						
8	VCCB4-25.0		14:00		1																						
9	VCCB4-36.5		1510		1																						
10	VCCB4-9.5-GW		12:50	GW	3																	X					

	Signature	Company	Date	Time
Relinquished		HWA	4/6/17	9:05A
Received		ALPHA	4/6/17	9:05A
Relinquished		ALPHA	4/6/17	10:05A
Received		ONE	4/6/17	1005
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

Page 2 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: VCC/Riverside #VOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 04-060

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HVOCs					% Moisture
11	VCCB4-21.0-GW	4/5/17	14:35	GW	3																	X					
12	VCCB4-35.5-GW	↓	15:50	↓	↓																	X					
13	Trip Blank	—	—	W	1																	X					
14	Dup-2	4/5/17	12:55	GW	3																	X					

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	Nicole Kapise	HWA	4/6/17	9:05A	
Received	Kim Clark	ALPHA	4/6/17	9:05A	
Relinquished	Kim Clark	ALPHA	4/6/17	10:05A	
Received	COE	COE	4/6/17	1005	
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

April 17, 2017

Arnie Sugar
HWA GeoSciences, Inc.
21312 30th Drive SE, Suite 110
Bothell, WA 98021

Re: Analytical Data for Project 2007-098-T2045
Laboratory Reference No. 1704-060B

Dear Arnie:

Enclosed are the analytical results and associated quality control data for samples submitted on April 6, 2017.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

Case Narrative

Samples were collected on April 5, 2017 and received by the laboratory on April 6, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Halogenated Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-27.5**					
Laboratory ID:	04-060-02					
Dichlorodifluoromethane	ND	0.0021	EPA 8260C	4-14-17	4-14-17	
Chloromethane	ND	0.0058	EPA 8260C	4-14-17	4-14-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Bromomethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Chloroethane	ND	0.0058	EPA 8260C	4-14-17	4-14-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Iodomethane	ND	0.0058	EPA 8260C	4-14-17	4-14-17	
Methylene Chloride	ND	0.0084	EPA 8260C	4-14-17	4-14-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Bromochloromethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Chloroform	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Trichloroethene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Dibromomethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	4-14-17	4-14-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB2-27.5**					
Laboratory ID:	04-060-02					
1,1,2-Trichloroethane	ND	0.0015	EPA 8260C	4-14-17	4-14-17	
Tetrachloroethene	0.046	0.0012	EPA 8260C	4-14-17	4-14-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Chlorobenzene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Bromoform	ND	0.0058	EPA 8260C	4-14-17	4-14-17	
Bromobenzene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,1,2,2-Tetrachloroethane	ND	0.0015	EPA 8260C	4-14-17	4-14-17	
1,2,3-Trichloropropane	ND	0.0015	EPA 8260C	4-14-17	4-14-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
1,2-Dibromo-3-chloropropane	ND	0.0077	EPA 8260C	4-14-17	4-14-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	4-14-17	4-14-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	4-14-17	4-14-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*73-134*				
Toluene-d8	*105*	*81-124*				
4-Bromofluorobenzene	*113*	*80-131*				

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-25.0**					
Laboratory ID:	04-060-08					
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	4-14-17	4-14-17	
Chloromethane	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Vinyl Chloride	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Bromomethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Chloroethane	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Trichlorofluoromethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloroethene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Iodomethane	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Methylene Chloride	ND	0.0072	EPA 8260C	4-14-17	4-14-17	
(trans) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloroethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
2,2-Dichloropropane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
(cis) 1,2-Dichloroethene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Bromochloromethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Chloroform	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,1,1-Trichloroethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Carbon Tetrachloride	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloropropene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,2-Dichloroethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Trichloroethene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,2-Dichloropropane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Dibromomethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Bromodichloromethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
(cis) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
(trans) 1,3-Dichloropropene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**UCCB4-25.0**					
Laboratory ID:	04-060-08					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	4-14-17	4-14-17	
Tetrachloroethene	0.034	0.00099	EPA 8260C	4-14-17	4-14-17	
1,3-Dichloropropane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Dibromochloromethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,2-Dibromoethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Chlorobenzene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,1,1,2-Tetrachloroethane	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Bromoform	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Bromobenzene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	4-14-17	4-14-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	4-14-17	4-14-17	
2-Chlorotoluene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
4-Chlorotoluene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,3-Dichlorobenzene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,4-Dichlorobenzene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,2-Dichlorobenzene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
1,2-Dibromo-3-chloropropane	ND	0.0066	EPA 8260C	4-14-17	4-14-17	
1,2,4-Trichlorobenzene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
1,2,3-Trichlorobenzene	ND	0.00099	EPA 8260C	4-14-17	4-14-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*73-134*				
Toluene-d8	*109*	*81-124*				
4-Bromofluorobenzene	*120*	*80-131*				

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0414S1					
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	4-14-17	4-14-17	
Chloromethane	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Bromomethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Chloroethane	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Iodomethane	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Methylene Chloride	ND	0.0073	EPA 8260C	4-14-17	4-14-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Bromochloromethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Chloroform	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Trichloroethene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Dibromomethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0414S1					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	4-14-17	4-14-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Chlorobenzene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Bromoform	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
Bromobenzene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	4-14-17	4-14-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	4-14-17	4-14-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
1,2-Dibromo-3-chloropropane	ND	0.0067	EPA 8260C	4-14-17	4-14-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	4-14-17	4-14-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	4-14-17	4-14-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*104*	*73-134*				
Toluene-d8	*104*	*81-124*				
4-Bromofluorobenzene	*118*	*80-131*				

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

HALOGENATED VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0414S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0470**	**0.0536**	0.0500	0.0500	94	107	66-127	13	15	
Benzene	**0.0470**	**0.0499**	0.0500	0.0500	94	100	76-122	6	15	
Trichloroethene	**0.0502**	**0.0521**	0.0500	0.0500	100	104	78-120	4	15	
Toluene	**0.0475**	**0.0506**	0.0500	0.0500	95	101	83-120	6	15	
Chlorobenzene	**0.0444**	**0.0477**	0.0500	0.0500	89	95	81-120	7	15	
Surrogate:										
Dibromofluoromethane					*87*	*91*	*73-134*			
Toluene-d8					*92*	*99*	*81-124*			
4-Bromofluorobenzene					*103*	*112*	*80-131*			

Date of Report: April 17, 2017
Samples Submitted: April 6, 2017
Laboratory Reference: 1704-060B
Project: 2007-098-T2045

% MOISTURE

Date Analyzed: 4-13-17

Client ID	Lab ID	% Moisture
UCCB2-27.5	04-060-02	22
UCCB4-25.0	04-060-08	16

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 04-060

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: Ultra Custom Cleaners / Riverside HVOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HVOCs				% Moisture
1	VCCB2-9.5	4/5/17	7:55	Soil	4																		X				
2	VCCB2-27.5		8:45		1																	X					X
3	VCCB2-38.0		9:45	↓	↓																						
4	VCCB2-9.0-GW		8:05	GW	3																	X					
5	VCCB2-25.0-GW		9:10																			X					
6	VCCB2-37.0-GW		10:50	↓	↓																	X					
7	VCCB4-10.5		12:30	Soil	4																						
8	VCCB4-25.0		14:00																			X					X
9	VCCB4-36.5		1510	↓	↓																						
10	VCCB4-9.5-GW	↓	12:50	GW	3																	X					

	Signature	Company	Date	Time
Relinquished		HWA	4/6/17	9:05A
Received		ALPHA	4/6/17	9:05A
Relinquished		ALPHA	4/6/17	10:05A
Received		ORE	4/6/17	1005
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
X Added 4/13/17. DB (STA)

Data Package: Standard ☒ Level III ☐ Level IV ☐
Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

Page 2 of 2

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: HWA GeoSciences
Project Number: 2007-098-T2045
Project Name: UCC/Riverside #VOC
Project Manager: Arnie Sugar
Sampled by: Nicole Kapise

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 04-060

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	HVOCs					% Moisture
11	UCCB4-21.0-GW	4/5/17	14:35	GW	3																	X					
12	UCCB4-35.5-GW	↓	15:50	↓	↓																	X					
13	Trip Blank	—	—	W	1																	X					
14	Dup-2	4/5/17	12:55	GW	3																	X					

	Signature	Company	Date	Time
Relinquished	Nicole Kapise	HWA	4/6/17	9:05A
Received	Kim Clark	ALPHA	4/6/17	9:05A
Relinquished	Kim Clark	ALPHA	4/6/17	10:05A
Received	CORE	CORE	4/6/17	1005
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____