

April 10, 2023

Sunny Becker, Ecology Site Manager
Department of Ecology - Toxics Cleanup Program
Northwest Region Office
15700 Dayton Avenue North
Shoreline, Washington 98133-9716



Re: Quarterly Progress Report for period ending March 2023

Site Name: **ULTRA CUSTOM CARE CLEANERS**
Site Address: 18300-18304 Bothell Way NE, Bothell WA 98011
Parcel Numbers: 072605-9003 and 072605-9191
Facility/Site No.: 379891
Consent Decree No.: 22-2-20573-3 (Effective date February 10, 2023)

Reporting Period: Feb - Mar 2023

Summary:

The City of Bothell (City, the PLP) continues to make progress on work being performed for the Ultra Custom Care Cleaners (Ultra) site, in accordance with the Consent Decree (CD) with the Washington State Department of Ecology.

Per the requirements of Part 7 of Section VI of the Consent Decree, the attached quarterly progress report has been prepared for the period preceding this submittal to satisfy the terms described in the Consent Decree.

During this period the work was geared towards performing the Pre-Remedial Design Investigation (PRDI). There was also coordination work done between the City and Ecology and affected businesses within the PRDI footprint.

The attached progress report provides an update on work accomplished for the period ending March 31, 2023. Please contact me if you have any questions.

Sincerely,

Ryan Roberts
Project Coordinator, City of Bothell
City of Bothell, Public Works Department
Phone: 425.471.1837
Email: ryan.roberts@bothellwa.gov

Public Works Department
18415 101st Ave NE
Bothell, WA 98011
425.806.6800
www.bothellwa.gov

PROGRESS REPORT

Reporting Period: Feb - Mar 2023
Date submitted (electronically): Apr 10, 2023
Date mailed (certified w/return receipt): *(deferred due to COVID-19 Stay at Home Order)*
Prepared by: Scott Adamek, Project Engineer

A. A list of on-site activities that have taken place during this quarter:

- Performing Pre-remedial Design Investigation (PRDI) field activities including:
 - Installation and retrieval of the passive flux meter (PFM) samplers
 - Sampling and analyses of selected groundwater monitoring wells for geochemical parameters
 - Collection of in-situ soil samples from both source area and other selected locations in plume footprint for excavation and in situ barrier injection design

B. Description of any sample results which deviate from the norm:

No sample results deviated from the norm; PRDI samples were consistent with the assumptions in the Cleanup Action Plan (CAP) regarding the magnitude and extent of site contamination.

C. Detailed description of any deviations from required tasks not otherwise documented in project plans or amendment requests:

No deviations from the required tasks were made during the reporting period.

D. Description of all deviations from the Scope of Work-Cleanup Action Plan (CAP in Exhibit B) and Schedule (Exhibit C) during the current quarter and any planned deviations in the upcoming quarter:

No schedule deviations from the CAP were made during the reporting period. Schedule deviations are not planned or anticipated in the upcoming quarter.

E. For any deviations in schedule, a plan for recovering lost time and maintaining compliance with the schedule:

No deviations - not applicable.

F. All raw data (including laboratory analyses) received during the previous quarter (if not previously submitted to Ecology), together with a detailed description of the underlying samples collected:

Three raw data reports were received during the reporting period:

- OnSite Environmental Inc. report for sample delivery group 2302-100, for analyses of geochemical parameters in groundwater
- OnSite Environmental Inc. report for sample for 2302-317, for analyses of CVOCs in soil, appended with soil grain size analysis subcontracted to AmTest Laboratories
- Enviroflux PFM Report for COB Ultra Site dated 3/24/2023

G. A list of planned activities for the upcoming quarter:

Planned activities for the upcoming quarter include preparation of an Agency Review Draft Engineering Design report, incorporating findings from the PRDI. The City will additionally begin planning for construction of the cleanup action.

Attachments

Laboratory Data Packages



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

February 17, 2023

Kristin Anderson
Floyd & Snider
601 Union Street, Suite 600
Seattle, WA 98101

Re: Analytical Data for Project COB Ultra
Laboratory Reference No. 2302-100

Dear Kristin:

Enclosed are the analytical results and associated quality control data for samples submitted on February 8, 2023.

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,

A handwritten signature in black ink, appearing to read "D. Baumeister", with a horizontal line extending to the right.

David Baumeister
Project Manager

Enclosures



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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: February 17, 2023
Samples Submitted: February 8, 2023
Laboratory Reference: 2302-100
Project: COB Ultra

Case Narrative

Samples were collected on February 8, 2023 and received by the laboratory on February 8, 2023. 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: February 17, 2023
 Samples Submitted: February 8, 2023
 Laboratory Reference: 2302-100
 Project: COB Ultra

TOTAL METALS
EPA 200.8/200.7

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UCCMW-29-020823						
Laboratory ID: 02-100-01						
Arsenic	ND	3.3	EPA 200.8	2-17-23	2-17-23	
Calcium	28000	1000	EPA 200.7	2-10-23	2-10-23	
Iron	250	50	EPA 200.7	2-10-23	2-10-23	
Magnesium	8200	1000	EPA 200.7	2-10-23	2-10-23	
Client ID: BB-2-020823						
Laboratory ID: 02-100-02						
Arsenic	ND	3.3	EPA 200.8	2-17-23	2-17-23	
Calcium	21000	1000	EPA 200.7	2-10-23	2-10-23	
Iron	ND	50	EPA 200.7	2-10-23	2-10-23	
Magnesium	10000	1000	EPA 200.7	2-10-23	2-10-23	
Client ID: UCCMW-34D-020823						
Laboratory ID: 02-100-03						
Arsenic	ND	3.3	EPA 200.8	2-17-23	2-17-23	
Calcium	25000	1000	EPA 200.7	2-10-23	2-10-23	
Iron	1400	50	EPA 200.7	2-10-23	2-10-23	
Magnesium	12000	1000	EPA 200.7	2-10-23	2-10-23	



Date of Report: February 17, 2023
 Samples Submitted: February 8, 2023
 Laboratory Reference: 2302-100
 Project: COB Ultra

**TOTAL METALS
 EPA 200.8/200.7
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0210WH1					
Calcium	ND	1000	EPA 200.7	2-10-23	2-10-23	
Iron	ND	50	EPA 200.7	2-10-23	2-10-23	
Magnesium	ND	1000	EPA 200.7	2-10-23	2-10-23	

Laboratory ID:	MB0217WM1					
Arsenic	ND	3.3	EPA 200.8	2-17-23	2-17-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	01-173-03							
	ORIG	DUP						
Calcium	22200	22400	NA	NA	NA	NA	1	20
Iron	481	490	NA	NA	NA	NA	2	20
Magnesium	12800	12900	NA	NA	NA	NA	1	20

Laboratory ID:	02-174-08							
	ORIG	DUP						
Arsenic	ND	ND	NA	NA	NA	NA	NA	20

MATRIX SPIKES

Laboratory ID:	01-173-03									
	MS	MSD	MS	MSD		MS	MSD			
Calcium	40900	42000	20000	20000	22200	93	99	75-125	3	20
Iron	19700	20900	20000	20000	481	96	102	75-125	6	20
Magnesium	31100	32700	20000	20000	12800	92	100	75-125	5	20

Laboratory ID:	02-174-08									
	MS	MSD	MS	MSD		MS	MSD			
Arsenic	122	114	111	111	ND	110	102	75-125	7	20



Date of Report: February 17, 2023
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 Laboratory Reference: 2302-100
 Project: COB Ultra

**DISSOLVED METALS
 EPA 6010D**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: UCCMW-29-020823						
Laboratory ID: 02-100-01						
Calcium	26000	1100	EPA 6010D		2-9-23	
Iron	ND	56	EPA 6010D		2-9-23	
Magnesium	8800	1100	EPA 6010D		2-9-23	
Client ID: BB-2-020823						
Laboratory ID: 02-100-02						
Calcium	19000	1100	EPA 6010D		2-9-23	
Iron	ND	56	EPA 6010D		2-9-23	
Magnesium	11000	1100	EPA 6010D		2-9-23	
Client ID: UCCMW-34D-020823						
Laboratory ID: 02-100-03						
Calcium	22000	1100	EPA 6010D		2-9-23	
Iron	ND	56	EPA 6010D		2-9-23	
Magnesium	13000	1100	EPA 6010D		2-9-23	



Date of Report: February 17, 2023
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 Laboratory Reference: 2302-100
 Project: COB Ultra

**DISSOLVED METALS
 EPA 6010D
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0209D1					
Calcium	ND	1100	EPA 6010D		2-9-23	
Iron	ND	56	EPA 6010D		2-9-23	
Magnesium	ND	1100	EPA 6010D		2-9-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	02-100-03							
	ORIG	DUP						
Calcium	22500	22400	NA	NA	NA	NA	0	20
Iron	ND	ND	NA	NA	NA	NA	NA	20
Magnesium	12600	12600	NA	NA	NA	NA	0	20

MATRIX SPIKES

Laboratory ID:	MS	MSD	MS	MSD	MS	MSD	MS	MSD	RPD	RPD Limit	Flags
Laboratory ID:	02-100-03										
Calcium	42000	41900	22200	22200	22500	88	88	75-125	0	20	
Iron	22200	22200	22200	22200	ND	100	100	75-125	0	20	
Magnesium	35700	35600	22200	22200	12600	104	104	75-125	0	20	



Date of Report: February 17, 2023
 Samples Submitted: February 8, 2023
 Laboratory Reference: 2302-100
 Project: COB Ultra

SULFATE
ASTM D516-11

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UCCMW-29-020823					
Laboratory ID:	02-100-01					
Sulfate	12	5.0	ASTM D516-11	2-10-23	2-10-23	
Client ID:	BB-2-020823					
Laboratory ID:	02-100-02					
Sulfate	9.9	5.0	ASTM D516-11	2-10-23	2-10-23	
Client ID:	UCCMW-34D-020823					
Laboratory ID:	02-100-03					
Sulfate	21	5.0	ASTM D516-11	2-10-23	2-10-23	



Date of Report: February 17, 2023
 Samples Submitted: February 8, 2023
 Laboratory Reference: 2302-100
 Project: COB Ultra

**SULFATE
 ASTM D516-11
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0210W1					
Sulfate	ND	5.0	ASTM D516-11	2-10-23	2-10-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	02-100-02							
	ORIG	DUP						
Sulfate	9.93	10.2	NA	NA	NA	3	10	

MATRIX SPIKE								
Laboratory ID:	02-100-02							
	MS	MS		MS				
Sulfate	19.9	10.0	9.93	100	72-128	NA	NA	

SPIKE BLANK								
Laboratory ID:	SB0210W1							
	SB	SB		SB				
Sulfate	9.27	10.0	NA	93	85-114	NA	NA	



Date of Report: February 17, 2023
 Samples Submitted: February 8, 2023
 Laboratory Reference: 2302-100
 Project: COB Ultra

NITRATE (as Nitrogen)
EPA 353.2

Matrix: Water
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	UCCMW-29-020823					
Laboratory ID:	02-100-01					
Nitrate	0.94	0.050	EPA 353.2	2-9-23	2-9-23	
Client ID:	BB-2-020823					
Laboratory ID:	02-100-02					
Nitrate	1.3	0.050	EPA 353.2	2-9-23	2-9-23	
Client ID:	UCCMW-34D-020823					
Laboratory ID:	02-100-03					
Nitrate	0.96	0.050	EPA 353.2	2-9-23	2-9-23	



Date of Report: February 17, 2023
 Samples Submitted: February 8, 2023
 Laboratory Reference: 2302-100
 Project: COB Ultra

NITRATE (as Nitrogen)
EPA 353.2
QUALITY CONTROL

Matrix: Water
 Units: mg/L-N

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0209W1					
Nitrate	ND	0.050	EPA 353.2	2-9-23	2-9-23	

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	02-100-01							
	ORIG	DUP						
Nitrate	0.935	0.951	NA	NA	NA	NA	2	10

MATRIX SPIKE								
Laboratory ID:	02-100-01							
	MS		MS		MS			
Nitrate	3.17		2.00	0.935	112	88-125	NA	NA

SPIKE BLANK								
Laboratory ID:	SB0209W1							
	SB		SB		SB			
Nitrate	2.20		2.00	NA	110	90-120	NA	NA





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-naphthalene) 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.
 - X2 - Sample extract treated with a silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, 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.
 - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





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

March 15, 2023

Kristin Anderson
Floyd & Snider
601 Union Street, Suite 600
Seattle, WA 98101

Re: Analytical Data for Project COB Ultra
Laboratory Reference No. 2302-317

Dear Kristin:

Enclosed are the analytical results and associated quality control data for samples submitted on February 28, 2023.

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,

A handwritten signature in black ink, appearing to read "DB", with a long horizontal flourish extending to the right.

David Baumeister
Project Manager

Enclosures



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

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: March 15, 2023
Samples Submitted: February 28, 2023
Laboratory Reference: 2302-317
Project: COB Ultra

Case Narrative

Samples were collected on February 27, 2023 and received by the laboratory on February 28, 2023. 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 15, 2023
 Samples Submitted: February 28, 2023
 Laboratory Reference: 2302-317
 Project: COB Ultra

VOLATILE ORGANICS EPA 8260D/SIM

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	A-S1-3					
Laboratory ID:	02-317-09					
Vinyl Chloride	ND	0.000036	EPA 8260D/SIM	3-8-23	3-8-23	
(trans) 1,2-Dichloroethene	ND	0.00071	EPA 8260D	3-8-23	3-8-23	
(cis) 1,2-Dichloroethene	ND	0.00071	EPA 8260D	3-8-23	3-8-23	
Trichloroethene	ND	0.00071	EPA 8260D	3-8-23	3-8-23	
Tetrachloroethene	ND	0.00071	EPA 8260D	3-8-23	3-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	125	75-130				
<i>Toluene-d8</i>	108	78-128				
<i>4-Bromofluorobenzene</i>	103	71-130				

Client ID:	A-B1-5.5					
Laboratory ID:	02-317-10					
Vinyl Chloride	ND	0.000056	EPA 8260D/SIM	3-8-23	3-8-23	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
Trichloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
Tetrachloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	112	75-130				
<i>Toluene-d8</i>	103	78-128				
<i>4-Bromofluorobenzene</i>	98	71-130				

Client ID:	A-B101-5.5					
Laboratory ID:	02-317-11					
Vinyl Chloride	ND	0.000053	EPA 8260D/SIM	3-8-23	3-8-23	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
Trichloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
Tetrachloroethene	ND	0.0011	EPA 8260D	3-8-23	3-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	107	75-130				
<i>Toluene-d8</i>	103	78-128				
<i>4-Bromofluorobenzene</i>	97	71-130				



Date of Report: March 15, 2023
 Samples Submitted: February 28, 2023
 Laboratory Reference: 2302-317
 Project: COB Ultra

VOLATILE ORGANICS EPA 8260D/SIM

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	A-S2-3					
Laboratory ID:	02-317-12					
Vinyl Chloride	ND	0.000040	EPA 8260D/SIM	3-8-23	3-8-23	
(trans) 1,2-Dichloroethene	ND	0.00079	EPA 8260D	3-8-23	3-8-23	
(cis) 1,2-Dichloroethene	ND	0.00079	EPA 8260D	3-8-23	3-8-23	
Trichloroethene	ND	0.00079	EPA 8260D	3-8-23	3-8-23	
Tetrachloroethene	ND	0.00079	EPA 8260D	3-8-23	3-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	114	75-130				
<i>Toluene-d8</i>	106	78-128				
<i>4-Bromofluorobenzene</i>	94	71-130				

Client ID:	C-S1-5.5					
Laboratory ID:	02-317-13					
Vinyl Chloride	ND	0.000037	EPA 8260D/SIM	3-8-23	3-8-23	
(trans) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	3-8-23	3-8-23	
(cis) 1,2-Dichloroethene	ND	0.00074	EPA 8260D	3-8-23	3-8-23	
Trichloroethene	ND	0.00074	EPA 8260D	3-8-23	3-8-23	
Tetrachloroethene	ND	0.00074	EPA 8260D	3-8-23	3-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	113	75-130				
<i>Toluene-d8</i>	104	78-128				
<i>4-Bromofluorobenzene</i>	102	71-130				

Client ID:	C-B1-10					
Laboratory ID:	02-317-14					
Vinyl Chloride	ND	0.000047	EPA 8260D/SIM	3-8-23	3-8-23	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260D	3-8-23	3-8-23	
(cis) 1,2-Dichloroethene	0.0079	0.00094	EPA 8260D	3-8-23	3-8-23	
Trichloroethene	ND	0.00094	EPA 8260D	3-8-23	3-8-23	
Tetrachloroethene	0.0023	0.00094	EPA 8260D	3-8-23	3-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	111	75-130				
<i>Toluene-d8</i>	106	78-128				
<i>4-Bromofluorobenzene</i>	97	71-130				



Date of Report: March 15, 2023
 Samples Submitted: February 28, 2023
 Laboratory Reference: 2302-317
 Project: COB Ultra

**VOLATILE ORGANICS EPA 8260D/SIM
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0308S2					
Vinyl Chloride	ND	0.000050	EPA 8260D/SIM	3-8-23	3-8-23	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	3-8-23	3-8-23	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260D	3-8-23	3-8-23	
Trichloroethene	ND	0.0010	EPA 8260D	3-8-23	3-8-23	
Tetrachloroethene	ND	0.0010	EPA 8260D	3-8-23	3-8-23	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	108	75-130				
<i>Toluene-d8</i>	103	78-128				
<i>4-Bromofluorobenzene</i>	106	71-130				

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0308S2									
	SB	SBD	SB	SBD	SB	SBD				
Vinyl Chloride	0.0435	0.0437	0.0500	0.0500	87	87	68-136	0	23	
(trans) 1,2-Dichloroethene	0.0547	0.0561	0.0500	0.0500	109	112	79-133	3	15	
(cis) 1,2-Dichloroethene	0.0575	0.0582	0.0500	0.0500	115	116	75-131	1	15	
Trichloroethene	0.0486	0.0508	0.0500	0.0500	97	102	80-129	4	18	
Tetrachloroethene	0.0504	0.0470	0.0500	0.0500	101	94	77-126	7	15	
<i>Surrogate:</i>										
<i>Dibromofluoromethane</i>					113	117	75-130			
<i>Toluene-d8</i>					104	99	78-128			
<i>4-Bromofluorobenzene</i>					103	104	71-130			



Date of Report: March 15, 2023
Samples Submitted: February 28, 2023
Laboratory Reference: 2302-317
Project: COB Ultra

% MOISTURE

Client ID	Lab ID	% Moisture	Date Analyzed
A-S1-3	02-317-09	6	3-6-23
A-B1-5.5	02-317-10	8	3-6-23
A-B101-5.5	02-317-11	6	3-6-23
A-S2-3	02-317-12	5	3-6-23
C-S1-5.5	02-317-13	5	3-6-23
C-B1-10	02-317-14	15	3-6-23





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-naphthalene) 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.
 - X2 - Sample extract treated with a silica gel cleanup procedure.
 - Y - The calibration verification for this analyte exceeded the 20% drift specified in methods 8260 & 8270, 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.
 - Y1 - Negative effects of the matrix from this sample on the instrument caused values for this analyte in the bracketing continuing calibration verification standard (CCVs) to be outside of 20% acceptance criteria. Because of this, quantitation limits and sample concentrations should be considered estimates.
 - Z -
- ND - Not Detected at PQL
 PQL - Practical Quantitation Limit
 RPD - Relative Percent Difference





Am Test Inc.
13600 NE 126TH PL
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(425) 885-1664

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Mar 15 2023
On-Site Environmental
14648 NE 95th ST
Redmond, WA 98052
Attention: David Baumeister

Dear David Baumeister:

Enclosed please find the analytical data for your COB ULTRA project.

The following is a cross correlation of client and laboratory identifications for your convenience.

CLIENT ID	MATRIX	AMTEST ID	TEST
B5-28-30	Soil	23-A003690	Grain Size, CONV
B5-33-35	Soil	23-A003691	Grain Size, CONV
B4-18-20	Soil	23-A003692	Grain Size, CONV
B4-23-25	Soil	23-A003693	Grain Size, CONV
B4-28-30	Soil	23-A003694	Grain Size, CONV
B4-33-35	Soil	23-A003695	Grain Size, CONV
B2-12-15	Soil	23-A003696	Grain Size, CONV
B2-18-20	Soil	23-A003697	Grain Size, CONV

Your samples were received on Tuesday, February 28, 2023. At the time of receipt, the samples were logged in and properly maintained prior to the subsequent analysis.

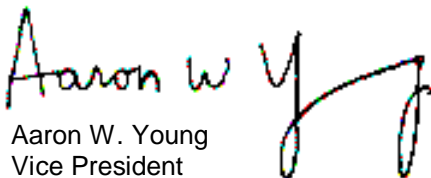
The analytical procedures used at AmTest are well documented and are typically derived from the protocols of the EPA, USDA, FDA or the Army Corps of Engineers.

Following the analytical data you will find the Quality Control (QC) results.

Please note that the detection limits that are listed in the body of the report refer to the Practical Quantitation Limits (PQL's), as opposed to the Method Detection Limits (MDL's).

If you should have any questions pertaining to the data package, please feel free to contact me.

Sincerely,


Aaron W. Young
Vice President

SDG #: 2328470
PO Number: 02-317

BACT = Bacteriological
CONV = Conventional

MET = Metals
ORG = Organics

NUT=Nutrients
DEM=Demand

MIN=Minerals

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ANALYSIS REPORT

On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003690
 Client Identification B5-28-30
 Sampling Date 02/27/23, 10:10

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	79.1	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	< 0.1 %	GRAVEL	0.30	ASTM D422	SF	03/09/23
- 2	4.00	0.20 %			ASTM D422	SF	03/09/23
-1	2.00	0.10 %			ASTM D422	SF	03/09/23
0	1.00	0.10 %	SAND	46.0	ASTM D422	SF	03/09/23
+1	0.50	0.10 %			ASTM D422	SF	03/09/23
+ 2	0.25	1.10 %			ASTM D422	SF	03/09/23
+ 3	0.125	10.6 %			ASTM D422	SF	03/09/23
+ 4	0.063	34.1 %			ASTM D422	SF	03/09/23
+ 5	0.032	12.7 %	SILT	45.3	ASTM D422	SF	03/09/23
+ 6	0.016	21.9 %			ASTM D422	SF	03/09/23
+ 7	0.008	8.60 %			ASTM D422	SF	03/09/23
+ 8	0.004	2.10 %			ASTM D422	SF	03/09/23
+ 9	0.002	1.50 %	CLAY	8.20	ASTM D422	SF	03/09/23
+ 10	0.001	0.90 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	5.80 %			ASTM D422	SF	03/09/23

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ANALYSIS REPORT

On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003691
 Client Identification B5-33-35
 Sampling Date 02/27/23, 11:10

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	77.7	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	< 0.1 %	GRAVEL	0.00	ASTM D422	SF	03/09/23
- 2	4.00	< 0.1 %			ASTM D422	SF	03/09/23
-1	2.00	< 0.1 %			ASTM D422	SF	03/09/23
0	1.00	0.10 %	SAND	41.3	ASTM D422	SF	03/09/23
+1	0.50	0.10 %			ASTM D422	SF	03/09/23
+ 2	0.25	0.10 %			ASTM D422	SF	03/09/23
+ 3	0.125	9.20 %			ASTM D422	SF	03/09/23
+ 4	0.063	31.8 %			ASTM D422	SF	03/09/23
+ 5	0.032	11.2 %	SILT	50.1	ASTM D422	SF	03/09/23
+ 6	0.016	24.8 %			ASTM D422	SF	03/09/23
+ 7	0.008	11.6 %			ASTM D422	SF	03/09/23
+ 8	0.004	2.50 %			ASTM D422	SF	03/09/23
+ 9	0.002	2.60 %	CLAY	8.70	ASTM D422	SF	03/09/23
+ 10	0.001	1.60 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	4.50 %			ASTM D422	SF	03/09/23

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ANALYSIS REPORT

On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003692
 Client Identification B4-18-20
 Sampling Date 02/27/23, 12:00

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	79.4	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	< 0.1 %	GRAVEL	0.00	ASTM D422	SF	03/09/23
- 2	4.00	< 0.1 %			ASTM D422	SF	03/09/23
-1	2.00	< 0.1 %			ASTM D422	SF	03/09/23
0	1.00	0.10 %	SAND	50.4	ASTM D422	SF	03/09/23
+1	0.50	0.80 %			ASTM D422	SF	03/09/23
+ 2	0.25	1.80 %			ASTM D422	SF	03/09/23
+ 3	0.125	30.0 %			ASTM D422	SF	03/09/23
+ 4	0.063	17.7 %			ASTM D422	SF	03/09/23
+ 5	0.032	19.2 %	SILT	43.0	ASTM D422	SF	03/09/23
+ 6	0.016	15.1 %			ASTM D422	SF	03/09/23
+ 7	0.008	6.30 %			ASTM D422	SF	03/09/23
+ 8	0.004	2.40 %			ASTM D422	SF	03/09/23
+ 9	0.002	1.20 %	CLAY	6.50	ASTM D422	SF	03/09/23
+ 10	0.001	0.50 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	4.80 %			ASTM D422	SF	03/09/23

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ANALYSIS REPORT

On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003693
 Client Identification B4-23-25
 Sampling Date 02/27/23, 12:10

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	79.3	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	< 0.1 %	GRAVEL	0.00	ASTM D422	SF	03/09/23
- 2	4.00	< 0.1 %			ASTM D422	SF	03/09/23
-1	2.00	< 0.1 %			ASTM D422	SF	03/09/23
0	1.00	< 0.1 %	SAND	71.6	ASTM D422	SF	03/09/23
+1	0.50	0.10 %			ASTM D422	SF	03/09/23
+ 2	0.25	9.80 %			ASTM D422	SF	03/09/23
+ 3	0.125	35.7 %			ASTM D422	SF	03/09/23
+ 4	0.063	26.0 %			ASTM D422	SF	03/09/23
+ 5	0.032	5.80 %	SILT	21.4	ASTM D422	SF	03/09/23
+ 6	0.016	10.5 %			ASTM D422	SF	03/09/23
+ 7	0.008	4.10 %			ASTM D422	SF	03/09/23
+ 8	0.004	1.00 %			ASTM D422	SF	03/09/23
+ 9	0.002	1.40 %	CLAY	6.90	ASTM D422	SF	03/09/23
+ 10	0.001	0.90 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	4.60 %			ASTM D422	SF	03/09/23

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On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003694
 Client Identification B4-28-30
 Sampling Date 02/27/23, 12:45

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	76.4	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	< 0.1 %	GRAVEL	0.20	ASTM D422	SF	03/09/23
- 2	4.00	< 0.1 %			ASTM D422	SF	03/09/23
-1	2.00	0.20 %			ASTM D422	SF	03/09/23
0	1.00	< 0.1 %	SAND	44.6	ASTM D422	SF	03/09/23
+1	0.50	0.10 %			ASTM D422	SF	03/09/23
+ 2	0.25	0.10 %			ASTM D422	SF	03/09/23
+ 3	0.125	0.90 %			ASTM D422	SF	03/09/23
+ 4	0.063	43.5 %			ASTM D422	SF	03/09/23
+ 5	0.032	14.9 %	SILT	47.2	ASTM D422	SF	03/09/23
+ 6	0.016	22.2 %			ASTM D422	SF	03/09/23
+ 7	0.008	7.70 %			ASTM D422	SF	03/09/23
+ 8	0.004	2.40 %			ASTM D422	SF	03/09/23
+ 9	0.002	2.10 %	CLAY	7.90	ASTM D422	SF	03/09/23
+ 10	0.001	1.30 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	4.50 %			ASTM D422	SF	03/09/23

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ANALYSIS REPORT

On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003695
 Client Identification B4-33-35
 Sampling Date 02/27/23, 13:20

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	83.4	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	1.70 %	GRAVEL	2.80	ASTM D422	SF	03/09/23
- 2	4.00	0.10 %			ASTM D422	SF	03/09/23
-1	2.00	1.00 %			ASTM D422	SF	03/09/23
0	1.00	0.90 %	SAND	59.6	ASTM D422	SF	03/09/23
+1	0.50	3.90 %			ASTM D422	SF	03/09/23
+ 2	0.25	34.7 %			ASTM D422	SF	03/09/23
+ 3	0.125	13.9 %			ASTM D422	SF	03/09/23
+ 4	0.063	6.20 %			ASTM D422	SF	03/09/23
+ 5	0.032	15.3 %	SILT	30.9	ASTM D422	SF	03/09/23
+ 6	0.016	10.7 %			ASTM D422	SF	03/09/23
+ 7	0.008	3.20 %			ASTM D422	SF	03/09/23
+ 8	0.004	1.70 %			ASTM D422	SF	03/09/23
+ 9	0.002	1.00 %	CLAY	6.60	ASTM D422	SF	03/09/23
+ 10	0.001	0.60 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	5.00 %			ASTM D422	SF	03/09/23

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ANALYSIS REPORT

On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003696
 Client Identification B2-12-15
 Sampling Date 02/27/23, 14:10

Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	83.1	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	0.20 %	GRAVEL	0.70	ASTM D422	SF	03/09/23
- 2	4.00	0.20 %			ASTM D422	SF	03/09/23
-1	2.00	0.30 %			ASTM D422	SF	03/09/23
0	1.00	0.30 %	SAND	62.0	ASTM D422	SF	03/09/23
+1	0.50	3.40 %			ASTM D422	SF	03/09/23
+ 2	0.25	28.6 %			ASTM D422	SF	03/09/23
+ 3	0.125	11.9 %			ASTM D422	SF	03/09/23
+ 4	0.063	17.8 %			ASTM D422	SF	03/09/23
+ 5	0.032	15.2 %	SILT	30.5	ASTM D422	SF	03/09/23
+ 6	0.016	10.6 %			ASTM D422	SF	03/09/23
+ 7	0.008	2.90 %			ASTM D422	SF	03/09/23
+ 8	0.004	1.80 %			ASTM D422	SF	03/09/23
+ 9	0.002	1.50 %	CLAY	6.80	ASTM D422	SF	03/09/23
+ 10	0.001	0.90 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	4.40 %			ASTM D422	SF	03/09/23

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ANALYSIS REPORT

On-Site Environmental
 14648 NE 95th ST
 Redmond, WA 98052
 Attention: David Baumeister
 Project Name: COB ULTRA
 SDG Number: 2328470
 PO Number: 02-317
 All results reported on a dry weight basis.

Date Received: 02/28/23
 Date Reported: 3/15/23

AMTEST Identification Number 23-A003697
 Client Identification B2-18-20
 Sampling Date 02/27/23, 14:20

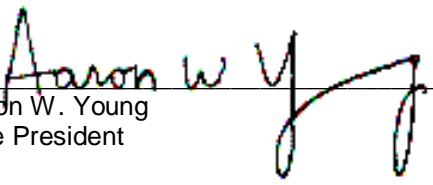
Conventionals

PARAMETER	RESULT	UNITS	Q	D.L.	METHOD	ANALYST	DATE
Total Solids	82.6	%		0.1	SM 2540G	SF	03/01/23

Grain Size Distribution

PHI	OPENING (mm)	% RETENTION	FRACTION	PERCENT	METHOD	ANALYST	DATE
-2.25	4.75	10.1 %	GRAVEL	11.6	ASTM D422	SF	03/09/23
- 2	4.00	0.10 %			ASTM D422	SF	03/09/23
-1	2.00	1.40 %			ASTM D422	SF	03/09/23
0	1.00	1.90 %	SAND	65.0	ASTM D422	SF	03/09/23
+1	0.50	5.00 %			ASTM D422	SF	03/09/23
+ 2	0.25	28.2 %			ASTM D422	SF	03/09/23
+ 3	0.125	10.7 %			ASTM D422	SF	03/09/23
+ 4	0.063	19.2 %			ASTM D422	SF	03/09/23
+ 5	0.032	6.50 %	SILT	17.7	ASTM D422	SF	03/09/23
+ 6	0.016	6.10 %			ASTM D422	SF	03/09/23
+ 7	0.008	3.10 %			ASTM D422	SF	03/09/23
+ 8	0.004	2.00 %			ASTM D422	SF	03/09/23
+ 9	0.002	0.70 %	CLAY	5.70	ASTM D422	SF	03/09/23
+ 10	0.001	0.30 %			ASTM D422	SF	03/09/23
> + 10	< 0.001	4.70 %			ASTM D422	SF	03/09/23

On-Site Environmental
Project Name: COB ULTRA
AmTest ID: 23-A003697



Aaron W. Young
Vice President

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 Kirkland, WA, 98034
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QC Summary for sample numbers: 23-A003690 to 23-A003697

DUPLICATES

SAMPLE #	ANALYTE	UNITS	SAMPLE VALUE	DUP VALUE	RPD
23-A003691	Total Solids	%	77.7	77.9	0.26
23-A003691	Total Solids	%	77.7	77.9	0.26
23-A003691	Gravel	%	0.00	0.00	
23-A003691	Gravel	%	0.00	0.10	200
23-A003691	Sand	%	41.3	41.5	0.48
23-A003691	Sand	%	41.3	40.3	2.5
23-A003691	Silt	%	50.1	49.9	0.40
23-A003691	Silt	%	50.1	51.2	2.2
23-A003691	Clay	%	8.70	8.70	0.00
23-A003691	Clay	%	8.70	8.50	2.3



MVA Onsite Environmental Inc.

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

Chain of Custody

Turnaround Request
(In working days)

(Check One)

- Same Day 1 Day
- 2 Days 3 Days
- Standard (7 Days)

(other)

Sampled by: Sally Lamb (Kristin Anderson)

Company: Floyd Snider
 Project Number:
 Project Name: COB UHra
 Project Manager: Kristin Anderson
 Sampled by: Sally Lamb (Kristin Anderson)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
1	B5-28-30	2/27/13	10:10	Soil	1
2	B5-33-35		11:10		1
3	B4-18-20		12:00		1
4	B4-23-25		12:10		1
5	B4-28-30		12:45		1
6	B4-33-35		13:20		1
7	B2-13-15		14:10		1
8	B2-18-20		14:20		1
9	A-S1-3	2/27/13	15:00	Soil	4
10	A-B1-5.5		15:10		4

Relinquished
 Received
 Relinquished
 Received
 Relinquished
 Received
 Relinquished
 Received
 Reviewed/Date

Signature
 Company
 Reviewed/Date

Laboratory Number: **02-317**

Date	Time	Comments/Special Instructions
2/28/13	11:14	For VOCs, only PCE, TCE, CIS-1,2-dichloroethene, trans-1,2-dichloroethene, and vinyl chloride w/ % moisture included under 8260D

Item	Result
NWTPH-HCID	
NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/>)	
NWTPH-Gx	
NWTPH-Dx (Acid / SG Clean-up <input type="checkbox"/>)	
Volatiles 8260	9260D
Halogenated Volatiles 8260	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270/SIM (with low-level PAHs)	
PAHs 8270/SIM (low-level)	
PCBs 8082	
Organochlorine Pesticides 8081	
Organophosphorus Pesticides 8270/SIM	
Chlorinated Acid Herbicides 8151	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664	
Grain Size ASTM D422	
% Moisture	

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



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Chain of Custody

Turnaround Request (in working days)
(Check One)

Same Day 1 Day

2 Days 3 Days

Standard (7 Days)

Date Sampled: 2/27/23 Time Sampled: 15:15 Matrix: SO11

Number of Containers

NWTPH-HCID	
NWTPH-Gx/BTEX (8021 <input type="checkbox"/> 8260 <input type="checkbox"/>)	
NWTPH-Gx	
NWTPH-Dx (Acid / SG Clean-up <input type="checkbox"/>)	
Volatiles 8260	<u>8260D</u>
Halogenated Volatiles 8260	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270/SIM (with low-level PAHs)	
PAHs 8270/SIM (low-level)	
PCBs 8082	
Organochlorine Pesticides 8081	
Organophosphorus Pesticides 8270/SIM	
Chlorinated Acid Herbicides 8151	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664	

% Moisture

Company: Flond/Sudder

Project Number: CRB Ultra

Project Name: CRB Ultra

Project Manager: Kristin Anderson

Sampled by: Mike Lamb (Kristin Anderson @ Flond/Sudder.com)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	A-B101-5.5	2/27/23	15:15	SO11	4
12	A-52-3		15:30		4
13	C-51-5.5		15:45		4
14	C-R1-10		16:00		4

Signature	Company	Date	Time	Comments/Special Instructions
	Flond/Sudder	2/28/23	11:14	For VOCs, only PCE, TCE, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and Vinyl chloride w/ % water included under 8260D

Relinquished

Received

Relinquished

Received

Relinquished

Received

Relinquished

Reviewed/Date

Reviewed/Date

Reviewed/Date

Chromatograms with final report Electronic Data Deliverables (EDDs)

Sample/Cooler Receipt and Acceptance Checklist

Client: FLS

Client Project Name/Number: COB Ultra

OnSite Project Number: 02-317

Initiated by: AMV

Date Initiated: 2/28/23

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	<input checked="" type="radio"/> No	N/A	1	2	3	4
1.2 Were the custody seals intact?	Yes	No	N/A	1	2	3	4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1	2	3	4
1.4 Were the samples delivered on ice or blue ice?	<input checked="" type="radio"/> Yes	No	N/A	1	2	3	4
1.5 Were samples received between 0-6 degrees Celsius?	<input checked="" type="radio"/> Yes	No	N/A	Temperature: <u>0</u>			
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A					
1.7 How were the samples delivered?	<input checked="" type="radio"/> Client	<input type="radio"/> Courier	<input type="radio"/> UPS/FedEx	<input type="radio"/> OSE Pickup	<input type="radio"/> Other		

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.2 Was the COC legible and written in permanent ink?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.3 Have samples been relinquished and accepted by each custodian?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.5 Were all of the samples listed on the COC submitted?	<input checked="" type="radio"/> Yes	No		1	2	3	4
2.6 Were any of the samples submitted omitted from the COC?	Yes	<input checked="" type="radio"/> No		1	2	3	4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	<input checked="" type="radio"/> No		1	2	3	4
3.2 Were any sample labels missing or illegible?	Yes	<input checked="" type="radio"/> No		1	2	3	4
3.3 Have the correct containers been used for each analysis requested?	<input checked="" type="radio"/> Yes	No		1	2	3	4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1	2	3	4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1	2	3	4
3.6 Is there sufficient sample submitted to perform requested analyses?	<input checked="" type="radio"/> Yes	No		1	2	3	4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	<input checked="" type="radio"/> No		1	2	3	4
3.8 Was method 5035A used?	<input checked="" type="radio"/> Yes	No	N/A	1	2	3	4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#	<u>1</u>	N/A	1	2	3	4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

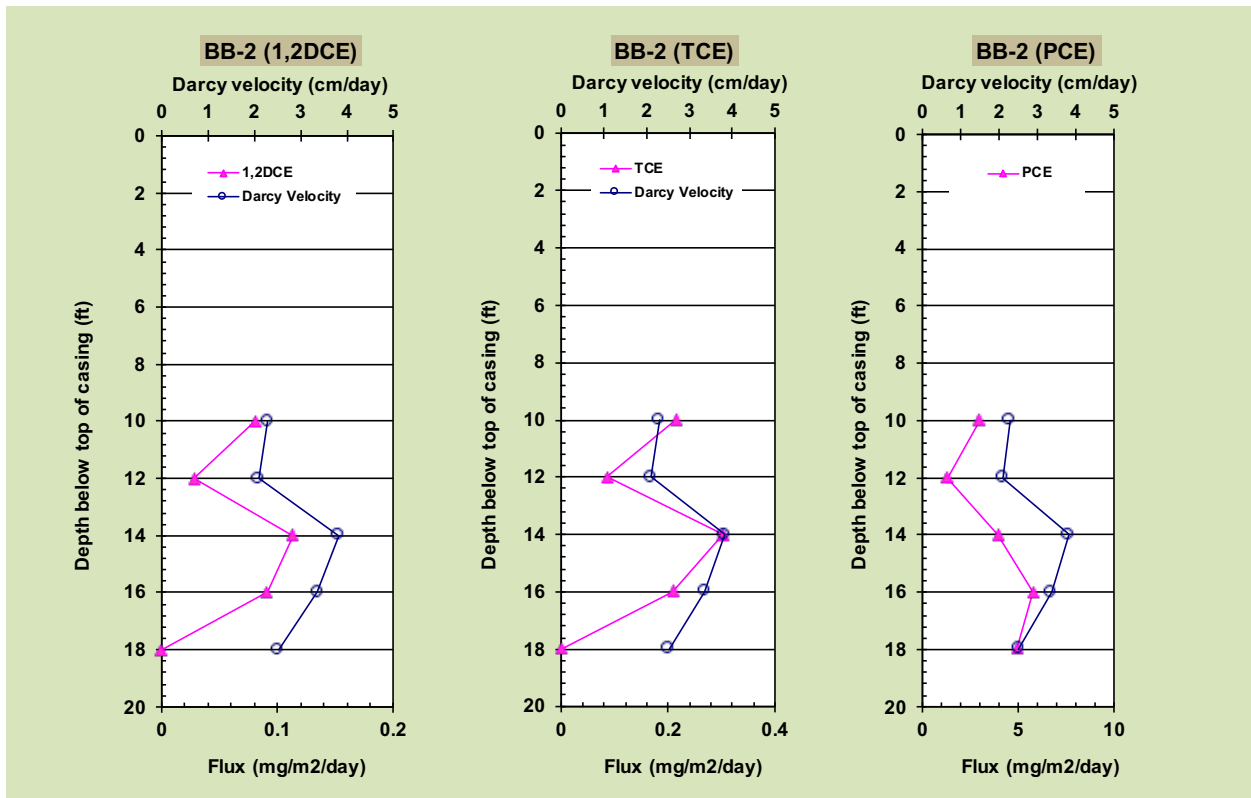
Floyd-Snider		Installation Date	2/8/23
Project name:	COB Ultra	Sampling Date	2/27/23
Project Manager	Kristin Anderson	Reporting Date	3/24/23

Table1. Summary of flux values for each well

Well_ID	Sample_ID	Depth below top of well casing (ft)	Darcy Velocity (cm/day)	cis-1,2DCE (mg/m ² /day)	TCE (mg/m ² /day)	PCE (mg/m ² /day)
BB-2	BB-2-9-11-022723	10.0	2.3	0.08	0.21	2.99
	BB-2-11-13-022723	12.0	2.1	0.03	0.09	1.31
	BB-2-13-15-022723	14.0	3.8	0.11	0.30	3.92
	BB-2-15-17-022723	16.0	3.4	0.09	0.21	5.77
	BB-2-17-19-022723	18.0	2.5	0.00	0.00	4.93
UCCMW-29	UCCMW-29-5-7-022723	6.0	0.2	0.00	0.00	0.36
	UCCMW-29-7-9-022723	8.0	1.3	0.00	0.00	0.23
	UCCMW-29-9-11-022723	10.0	1.0	0.00	0.00	0.52
	UCCMW-29-11-13-022723	12.0	0.5	0.04	0.00	0.65
	UCCMW-29-13-15-022723	14.0	1.8	0.06	0.00	0.75
UCCMW-34D	UCCMW-34D-35-37-022723	36.0	4.0	0.00	0.00	0.02
	UCCMW-34D-37-39-022723	38.0	4.4	0.00	0.00	2.15
	UCCMW-34D-39-41-022723	40.0	6.9	0.00	0.00	3.23
	UCCMW-34D-41-43-022723	42.0	5.3	0.00	0.00	2.62
	UCCMW-34D-43-45-022723	44.0	7.6	0.00	0.00	2.03
	UCCMW-34D-45-47-022723	46.0	10.1	0.00	0.00	4.42
	UCCMW-34D-47-49-022723	48.0	8.3	0.00	0.00	2.77
	UCCMW-34D-49-50-022723	49.5	9.8	0.00	0.00	1.51

Table2. Summary of flux average contaminant concentration

Well_ID	Sample_ID	Depth below top of well casing (ft)	Darcy Velocity (cm/day)	cis-1,2DCE (ug/L)	TCE (ug/L)	PCE (ug/L)
BB-2	BB-2-9-11-022723	10.0	2.3	4	9	131
	BB-2-11-13-022723	12.0	2.1	1	4	62
	BB-2-13-15-022723	14.0	3.8	3	8	102
	BB-2-15-17-022723	16.0	3.4	3	6	172
	BB-2-17-19-022723	18.0	2.5	0	0	196
UCCMW-29	UCCMW-29-5-7-022723	6.0	0.2	0	0	144
	UCCMW-29-7-9-022723	8.0	1.3	0	0	17
	UCCMW-29-9-11-022723	10.0	1.0	0	0	50
	UCCMW-29-11-13-022723	12.0	0.5	7	0	122
	UCCMW-29-13-15-022723	14.0	1.8	4	0	41
UCCMW-34D	UCCMW-34D-35-37-022723	36.0	4.0	0	0	0
	UCCMW-34D-37-39-022723	38.0	4.4	0	0	48
	UCCMW-34D-39-41-022723	40.0	6.9	0	0	47
	UCCMW-34D-41-43-022723	42.0	5.3	0	0	49
	UCCMW-34D-43-45-022723	44.0	7.6	0	0	27
	UCCMW-34D-45-47-022723	46.0	10.1	0	0	44
	UCCMW-34D-47-49-022723	48.0	8.3	0	0	34
	UCCMW-34D-49-50-022723	49.5	9.8	0	0	15



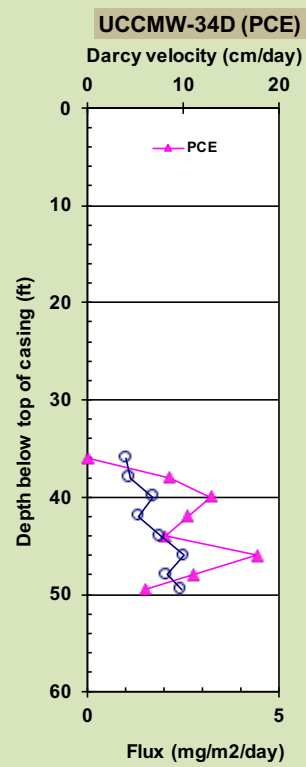
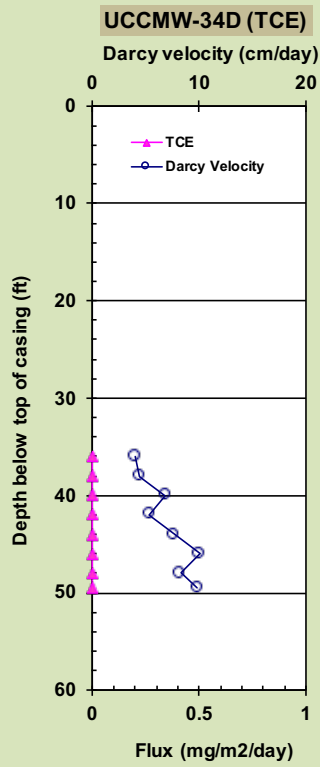
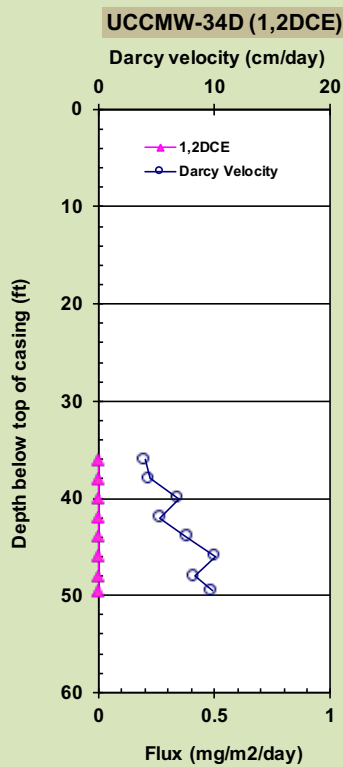
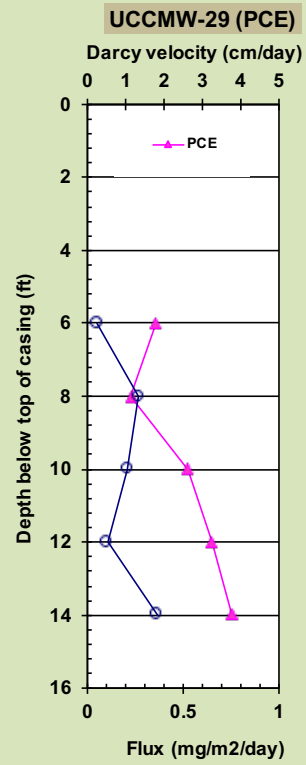
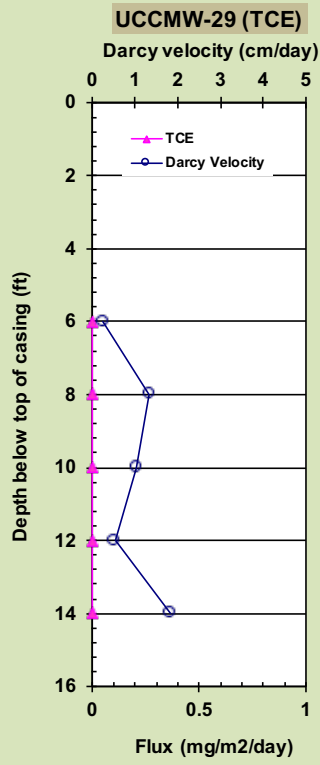
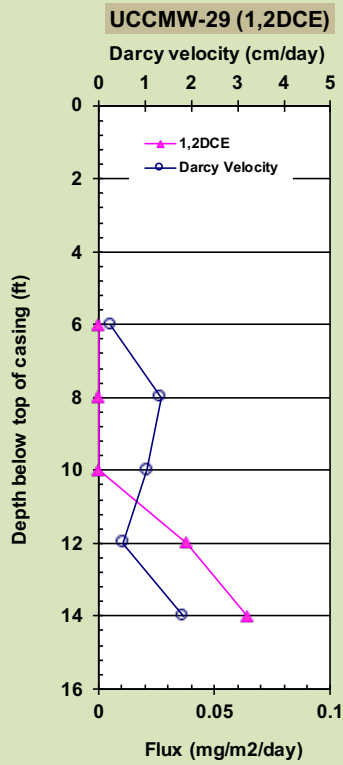


Table 3. Mass discharge per unit width for aquifer of each well

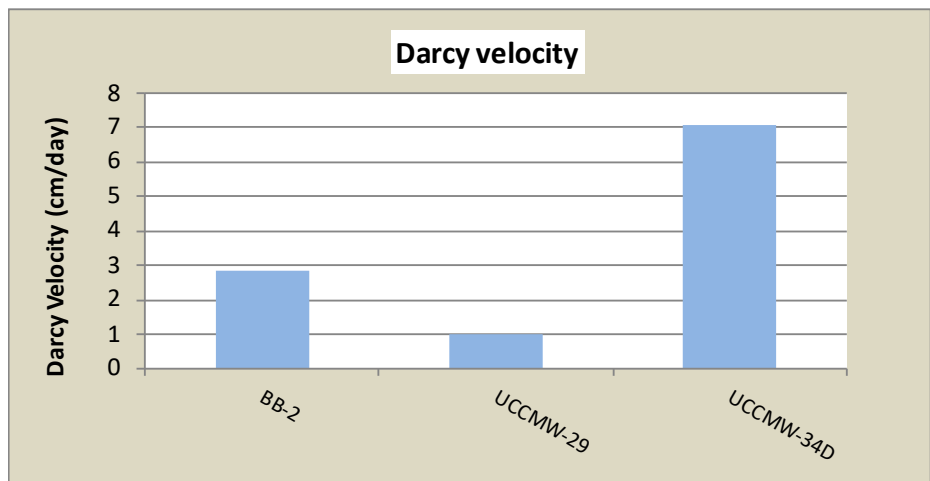
Well	Darcy Velocity (cm/day)	cis-1,2DCE (mg/m/day)	TCE (mg/m/day)	PCE (mg/m/day)
BB-2	2.8	0.19	0.5	11.5
UCCMW-29	1.0	0.06	0.0	1.5
UCCMW-34D	7.1	0.0	0.0	0.0

Table 4. Well average values of mass flux based on PFMs

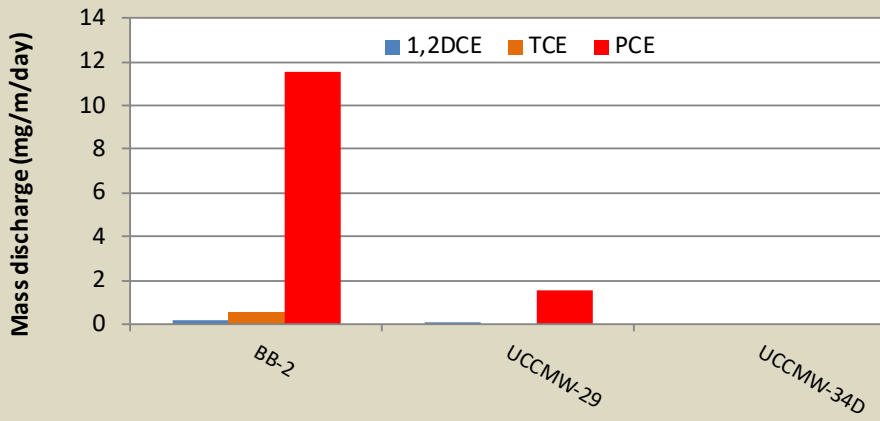
Well	Darcy Velocity (cm/day)	cis-1,2DCE (mg/m ² /day)	TCE (mg/m ² /day)	PCE (mg/m ² /day)
BB-2	2.8	0.06	0.16	3.78
UCCMW-29	1.0	0.02	0.00	0.50
UCCMW-34D	7.1	0.00	0.00	2.34

Table 5. Flux average contaminant concentration on PFMs

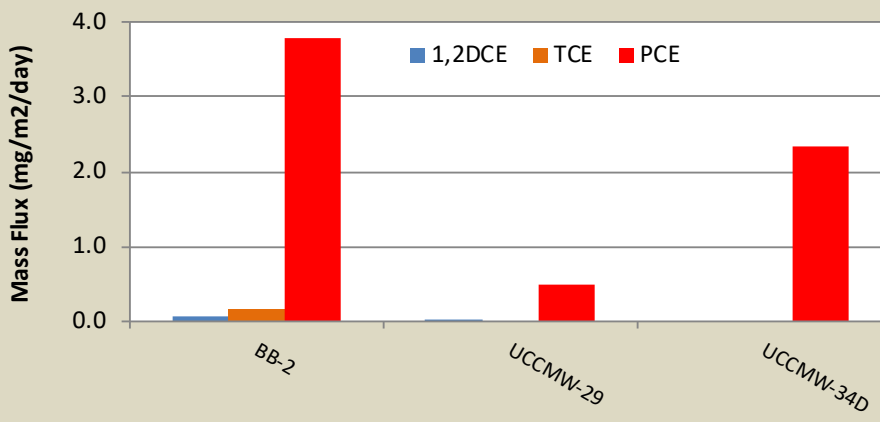
Well	Darcy Velocity (cm/day)	cis-1,2DCE (ug/L)	TCE (ug/L)	PCE (ug/L)
BB-2	2.8	2	6	133
UCCMW-29	1.0	2	0	75
UCCMW-34D	7.1	0	0	33



Mass Discharge per unit width



Mass Flux



Flux Average Contaminant Conc.

