

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

June 13, 2019

Brian Doan SCS Engineers 2405 140th Avenue NE, Suite 107 Bellevue, WA 98005

Re: Analytical Data for Project 04218014.00 Laboratory Reference No. 1906-028

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on June 5, 2019.

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: June 13, 2019 Samples Submitted: June 5, 2019 Laboratory Reference: 1906-028 Project: 04218014.00

Case Narrative

Samples were collected on June 4, 2019 and received by the laboratory on June 5, 2019. 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.



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

GASOLINE RANGE ORGANICS NWTPH-Gx

Matrix: Water Units: ug/L (ppb)

				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
Client ID:	MW-1					
Laboratory ID:	06-028-01					
Stoddard Solvent	ND	100	NWTPH-Gx	6-11-19	6-11-19	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	93	59-122				
Client ID:	MW-2					
Laboratory ID:	06-028-02					
Stoddard Solvent	ND	100	NWTPH-Gx	6-11-19	6-11-19	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	80	59-122				
Client ID:	MW-3					
Laboratory ID:	06-028-03					
Stoddard Solvent	ND	100	NWTPH-Gx	6-11-19	6-11-19	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	79	59-122				
0	•					



GASOLINE RANGE ORGANICS NWTPH-Gx QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

						Date	Date)			
Analyte		Result	PQL	Me	ethod	Prepared	Analyz	ed	Flags		
METHOD BLANK											
Laboratory ID:		MB0611W3									
Stoddard Solvent		ND		NW	ГРН-Gx	6-11-19	6-11-1	19			
Surrogate:	Pe	rcent Recovery	Control Lim	its							
Fluorobenzene		73	59-122								
				Source	Percent	Recovery		RPD			
Analyte	Res	sult	Spike Level	Result	Recovery	Limits	RPD	Limit	Flags		
DUPLICATE											
Laboratory ID:	06-02	28-01									
	ORIG DUP										
Stoddard Solvent	ND	ND	NA NA		NA	NA	NA 30				
0											

93

75

59-122

Surrogate: Fluorobenzene

M

DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx

Matrix: Water Units: mg/L (ppm)

Result	DOI				
	PQL	Method	Prepared	Analyzed	Flags
MW-1					
06-028-01					
ND	0.26	NWTPH-Dx	6-10-19	6-11-19	
ND	0.41	NWTPH-Dx	6-10-19	6-11-19	
Percent Recovery	Control Limits				
86	50-150				
MW-2					
06-028-02					
ND	0.25	NWTPH-Dx	6-10-19	6-11-19	
ND	0.41	NWTPH-Dx	6-10-19	6-11-19	
Percent Recovery	Control Limits				
89	50-150				
MW-3					
06-028-03					
ND	0.25	NWTPH-Dx	6-10-19	6-11-19	
ND	0.40	NWTPH-Dx	6-10-19	6-11-19	
Percent Recovery	Control Limits				
88	50-150				
	06-028-01 ND ND Percent Recovery 86 MW-2 06-028-02 ND ND Percent Recovery 89 MW-3 06-028-03 ND ND ND ND ND	06-028-01 ND 0.26 ND 0.41 Percent Recovery Control Limits 86 50-150 MW-2 50-150 06-028-02 0.41 Percent Recovery 0.25 ND 0.25 ND 0.41 Percent Recovery Control Limits 89 50-150 MW-3 50-150 ND 0.25 ND 0.215 ND 0.215 ND 0.25 ND 0.40 Percent Recovery Control Limits	06-028-01NWTPH-DxND0.26NWTPH-DxND0.41NWTPH-DxPercent Recovery 86Control Limits 50-150Kenter SolutionMW-2 06-028-02NWTPH-DxND0.25NWTPH-DxPercent Recovery 89Control Limits 50-150Kenter SolutionMW-3 06-028-03SolutionKenter SolutionMW-3 06-028-03NWTPH-DxKenter SolutionKenter SolutionPercent Recovery ND0.25NWTPH-DxND0.25NWTPH-DxPercent Recovery NDControl Limits SolutionNWTPH-DxPercent Recovery NDControl Limits SolutionNWTPH-DxPercent Recovery Percent RecoveryControl Limits SolutionNWTPH-DxPercent RecoveryControl Limits SolutionNWTPH-DxPercent RecoveryControl Limits SolutionNWTPH-DxPercent RecoveryControl Limits SolutionNWTPH-DxPercent RecoveryControl Limits SolutionNWTPH-DxPercent RecoveryControl LimitsNWTPH-DX	06-028-01 NWTPH-Dx 6-10-19 ND 0.41 NWTPH-Dx 6-10-19 Percent Recovery Control Limits 6-10-19 86 50-150	06-028-01 ND 0.26 NWTPH-Dx 6-10-19 6-11-19 ND 0.41 NWTPH-Dx 6-10-19 6-11-19 Percent Recovery Control Limits 50-150 Kerner Kerner MW-2 06-028-02 NWTPH-Dx 6-10-19 6-11-19 ND 0.25 NWTPH-Dx 6-10-19 6-11-19 ND 0.25 NWTPH-Dx 6-10-19 6-11-19 Percent Recovery Control Limits 89 50-150 6-10-19 6-11-19 Percent Recovery Control Limits 6-10-19 6-11-19 6-11-19 Percent Recovery Control Limits 6-10-19 6-11-19 MD 0.25 NWTPH-Dx 6-10-19 6-11-19 ND 0.25 NWTPH-Dx 6-10-19 6-11-19 ND 0.25 NWTPH-Dx 6-10-19 6-11-19 Percent Recovery 0.40 NWTPH-Dx 6-10-19 6-11-19 Percent Recovery Control Limits 6-10-19 6-11-19



DIESEL AND HEAVY OIL RANGE ORGANICS NWTPH-Dx QUALITY CONTROL

Matrix: Water Units: mg/L (ppm)

c <i>i</i>				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0610W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	6-10-19	6-11-19	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	6-10-19	6-11-19	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	72	50-150				

					Source	Perce	ent	Recovery		RPD	
Analyte	Res	sult	Spike	Level	Result	Recov	ery	Limits	RPD	Limit	Flags
DUPLICATE											
Laboratory ID:	SB06	10W1									
	ORIG	DUP									
Diesel Fuel #2	0.829	0.763	NA	NA		NA		NA	8	NA	
Lube Oil Range	ND	ND	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						92	82	50-150			



6

TOTAL METALS EPA 200.8/7470A

Matrix: Water Units: ug/L (ppb)

				Date	Date				
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags			
Client ID:	MW-1								
Laboratory ID:	06-028-01								
Arsenic	11	3.3	EPA 200.8	6-11-19	6-11-19				
Barium	ND	28	EPA 200.8	6-11-19	6-11-19				
Cadmium	ND	4.4	EPA 200.8	6-11-19	6-11-19				
Chromium	ND	11	EPA 200.8	6-11-19	6-11-19				
Lead	ND	1.1	EPA 200.8	6-11-19	6-11-19				
Mercury	ND	0.50	EPA 7470A	6-11-19	6-11-19				
Selenium	ND	5.6	EPA 200.8	6-11-19	6-11-19				
Silver	ND	11	EPA 200.8	6-11-19	6-11-19				

Client ID:	MW-2					
Laboratory ID:	06-028-02					
Arsenic	ND	3.3	EPA 200.8	6-11-19	6-11-19	
Barium	ND	28	EPA 200.8	6-11-19	6-11-19	
Cadmium	ND	4.4	EPA 200.8	6-11-19	6-11-19	
Chromium	ND	11	EPA 200.8	6-11-19	6-11-19	
Lead	ND	1.1	EPA 200.8	6-11-19	6-11-19	
Mercury	ND	0.50	EPA 7470A	6-11-19	6-11-19	
Selenium	ND	5.6	EPA 200.8	6-11-19	6-11-19	
Silver	ND	11	EPA 200.8	6-11-19	6-11-19	

Client ID:	MW-3					
Laboratory ID:	06-028-03					
Arsenic	21	3.3	EPA 200.8	6-11-19	6-11-19	
Barium	ND	28	EPA 200.8	6-11-19	6-11-19	
Cadmium	ND	4.4	EPA 200.8	6-11-19	6-11-19	
Chromium	ND	11	EPA 200.8	6-11-19	6-11-19	
Lead	ND	1.1	EPA 200.8	6-11-19	6-11-19	
Mercury	ND	0.50	EPA 7470A	6-11-19	6-11-19	
Selenium	ND	5.6	EPA 200.8	6-11-19	6-11-19	
Silver	ND	11	EPA 200.8	6-11-19	6-11-19	



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

TOTAL METALS EPA 200.8/7470A QUALITY CONTROL

Matrix: Water Units: ug/L (ppb)

9 , 1 (1 ,				Date	Date	
Analyte	Result	PQL	Method	Prepared	Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0611WM1					
Arsenic	ND	3.3	EPA 200.8	6-11-19	6-11-19	
Barium	ND	28	EPA 200.8	6-11-19	6-11-19	
Cadmium	ND	4.4	EPA 200.8	6-11-19	6-11-19	
Chromium	ND	11	EPA 200.8	6-11-19	6-11-19	
Lead	ND	1.1	EPA 200.8	6-11-19	6-11-19	
Selenium	ND	5.6	EPA 200.8	6-11-19	6-11-19	
Silver	ND	11	EPA 200.8	6-11-19	6-11-19	
Laboratory ID:	MB0611W1					
Mercury	ND	0.50	EPA 7470A	6-11-19	6-11-19	

				Source		Pe	rcent	Recovery		RPD					
Analyte	Res	sult	Spike	Level	Result	Rec	overy	Limits	RPD	Limit	Flags				
DUPLICATE															
Laboratory ID:	06-02	28-03													
	ORIG	DUP													
Arsenic	20.6	20.3	NA	NA		1	NA	NA	1	20					
Barium	ND	ND	NA	NA		1	NA	NA	NA	20					
Cadmium	ND	ND	NA	NA		1	NA	NA	NA	20					
Chromium	ND	ND	NA	NA		1	NA	NA	NA	20					
Lead	ND	ND	NA	NA		1	NA	NA	NA	20					
Selenium	ND	ND	NA	NA			NA	NA	NA	20					
Silver	ND	ND	NA	NA			NA	NA	NA	20					
Laboratory ID:	06-08	34-01													
Mercury	ND	ND	NA	NA		1	NA	NA	NA	20					
MATRIX SPIKES															
Laboratory ID:	06-02	28-03													
,	MS	MSD	MS	MSD		MS	MSD								
Arsenic	126	130	111	111	20.6	95	99	75-125	3	20					
Barium	112	116	111	111	ND	101	105	75-125	4	20					
Cadmium	101	105	111	111	ND	91	95	75-125	4	20					
Chromium	100	104	111	111	ND	90	94	75-125	4	20					
Lead	97.8	102	111	111	ND	88	92	75-125	4	20					
Selenium	116	122	111	111	ND	105	110	75-125	4	20					
Silver	107	115	111	111	ND	97 104		75-125	7	20					
Laboratory ID:	06-08	84-01													
Mercury	6.25	5.50	6.25	6.25	ND	100 88		100 88		100 88		75-125	13	20	

M

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



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.
- 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.

Ζ-

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



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

OnSite Environmental Inc.		Chain of Custody													Page of									
Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052		naround Req n working da			Laboratory Number:					06-028														
Phone: (425) 883-3881 · www.onsite-env.com Company: SCS Ensineers Project Number: OU218014,00 Project Name: Belleune South Project Manager: Brian Doan Sampled by:	Sam	(Check One) e Day	1 Day	Number of Containers			X	Acid / SG Clean-up)				Semivolatiles 8270D/SIM (with low-level PAHs)		ne Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	als	nd grease) 1664A				0
Sam Grabar	Date	Time		umber o	NWTPH-HCID	NWTPH-Gx/BTEX	WTPH-G	WTPH-D	Volatiles 8260C	alogenat	DB EPA	emivolat vith low-l	PCRs 80824	rganoch	rganoph	hlorinate	otal RCR	otal MTC	TCLP Metals	HEM (oil and				Moisture
Lab ID Sample Identification $\mathcal{MW} = \left[\begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$	Sampled 6/4/19	Sampled	Matrix Water	1	Z	z	Z	X	×	T	Ξ	0.20		. 0	0	0	X	12	Ĕ	I		-		%
	1	1135	1	6				1		_				_				-					-	$\left - \right $
2 MW-2 3 MW-3		1326		5				V		_							V							
Signature	C	ompany		-		Date	1		Time			Com	nents	/Speci	al Insi	ructio	ons							
Relinquished And Received Relinquished Received Relinquished	2	SUS AU A	PHA PHA SE	1- - A	2	4	5/1 5/1 5/1	199	10	25 2:0 2:2	5	-												
Received												Data	Pack	age: S	Standa	ard	Le	vel III		Leve	IV 🗆			
Reviewed/Date		Reviewed/Da	ate									Chror	natog	rams	with fi	nal re	port [Ele	ectron	ic Data	a Delive	rables (EDDs)	