



TECHNICAL MEMORANDUM

Date: August 27, 2018

To: Mr. Helmuth Schlueter
Schlueter Family Trust
27911 Northeast Big Rock Road
Duvall, WA 98019

From: Audrey R. Heisey, LHG
The Riley Group, Inc.

Subject: Schlueter Property
1515 196th Street Southeast (Site)
Bothell, Snohomish County, Washington 98012
RGI Project No. 2018-158

On August 22, 2018, follow-up analysis was conducted for diesel-range hydrocarbons for groundwater samples that were collected at 1515 196th Street Southeast, Bothell, Washington 98012. Refer to the report, *Phase II Oversight and Sampling Services, Schlueter Property, 1515 196th Street Southeast, Bothell, Washington 98012, Riley Group, Inc. (RGI) Project No. 2018-158, dated August 14, 2018* (report) for a complete description of activities and data/analysis related to the subsurface investigation conducted at the Site.

In July 2018, per Quality Assurance and Quality Control (QA/QC) protocol, the samples collected from the site were transferred to the accredited laboratory (OnSite Environmental, Inc.) from RGI under the signed chain-of-custody. Once the laboratory completed requested analysis, the remaining sample media was stored in a secured location in accordance with laboratory procedure. On August 21, 2018, RGI requested the laboratory prepare and analyze stored groundwater samples TP2 and TP3 for diesel range hydrocarbon by Method NWTPH-Dx without silica gel cleanup.

Analytical results for both the July 2018 and August 2018 analysis did not detect diesel range hydrocarbons above the laboratory detection limits. Analytical results were reported within designated QA/QC parameters. The laboratory analytical report for the August analysis is attached for reference. Analytical results for the July analysis may be reviewed in the report. No further action is recommended at the Site at this time. Feel free to reach out to me at 425.415.0314 or audreyh@riley-group.com with questions or concern regarding this memorandum.

Attachments: Laboratory Analytical Report Dated August 22, 2018



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

August 22, 2018

Audrey Heisey
The Riley Group, Inc.
17522 Bothell Way NE, Suite A
Bothell, WA 98011

Re: Analytical Data for Project Schlueter Property
Laboratory Reference No. 1807-095B

Dear Audrey:

Enclosed are the analytical results and associated quality control data for samples submitted on July 16, 2018.

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 stroke 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: August 22, 2018
Samples Submitted: July 16, 2018
Laboratory Reference: 1807-095B
Project: Schlueter Property

Case Narrative

Samples were collected on July 16, 2018, and received by the laboratory on July 16, 2018. 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: August 22, 2018
 Samples Submitted: July 16, 2018
 Laboratory Reference: 1807-095B
 Project: Schlueter Property

**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	TP2					
Laboratory ID:	07-095-02					
Diesel Range Organics	ND	0.31	NWTPH-Dx	7-18-18	8-20-18	
Lube Oil Range Organics	ND	0.50	NWTPH-Dx	7-18-18	8-20-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>82</i>	<i>50-150</i>				
Client ID:	TP3					
Laboratory ID:	07-095-03					
Diesel Range Organics	ND	0.30	NWTPH-Dx	7-18-18	8-20-18	
Lube Oil Range Organics	ND	0.48	NWTPH-Dx	7-18-18	8-20-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>88</i>	<i>50-150</i>				



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**DIESEL AND HEAVY OIL RANGE ORGANICS
 NWTPH-Dx
 QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0718W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	7-18-18	7-18-18	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	7-18-18	7-18-18	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	84	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-098-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
<i>Surrogate:</i>								
<i>o-Terphenyl</i>				86	86	50-150		





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 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





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

Company: RGE
Project Number: _____

Project Name: Schluter Property
Project Manager: Cliff Nale

Sampled by: TR

Turnaround Request (in working days)

(Check One)

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

_____ (other)

Lab ID Sample Identification

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix
1	TP01	7/16	1510	water
2	TP02		1530	
3	TP03		1410	
4	TP04		1450	

Number of Containers

Parameter	Count
NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx (X 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	
Total Lead/Cadmium	X
Dissolved Lead/Cadmium	X
NWTPH-Dx WITHOUT ACU CLEAN-UP	X
% Moisture	

Laboratory Number: **07-095**

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

[Signature]

RGE

7/16

1643

Invoice: Helmut and Anne Schuster 27717 NE Big Rock Road Duval, WA 98019
⊗ Added 8/20/18. D3 (STA)

[Signature]

RGE

7/16/18

1643

⊗ Added 8/20/18. D3 (STA)

Chromatograms with final report Electronic Data Deliverables (EDDs)