



December 19, 2019

**Olsson Associates**

**Trent Watne**

**1525 Raleigh St, Suite 400**

**Denver**

**CO 80204**

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**Project Name - GWOC Schaefer 13-032 HC Spill Response      Project Number - 019-2447**

Attached are your analytical results for GWOC Schaefer 13-032 HC Spill Response received by Origins Laboratory, Inc. December 13, 2019. This project is associated with Origins project number Y912244-01.

The analytical results in the following report were analyzed under the guidelines of EPA Methods. These methods are identified as follows; "SW" are defined in SW-846, "EPA" are defined in 40CFR part 136 and "SM" are defined in the most current revision of Standard Methods For the Examination of Water and Wastewater.

The analytical results apply specifically to the samples and analyses specified per the attached Chain of Custody. As such, this report shall not be reproduced except in full, without the written approval of Origin's laboratory.

Unless otherwise noted, the analytical results for all soil samples are reported on a wet weight basis. All analytical analyses were performed under NELAP guidelines unless noted by a data qualifier.

Any holding time exceedances, deviations from the method specifications or deviations from Origins Laboratory's Standard Operating Procedures are outlined in the case narrative.

Thank you for selecting Origins for your analytical needs. Please contact us with any questions concerning this report, or if we can help with anything at all.

Origins Laboratory, Inc.  
303.433.1322  
o-squad@oelabinc.com



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1725 Elk Place, Denver, CO 80211 | Phone: 303.433.1322 | Fax: 303.265.9645

Olsson Associates

1525 Raleigh St, Suite 400

Denver CO 80204

Trent Watne

Project Number: 019-2447

Project: GWOC Schaefer 13-032 HC Spill  
Response

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Base-1-5	Y912244-01	Soil	December 13, 2019 12:05	12/13/2019 15:10
Base-2-6	Y912244-02	Soil	December 13, 2019 12:07	12/13/2019 15:10
Base-3-4	Y912244-03	Soil	December 13, 2019 12:09	12/13/2019 15:10
Base-4-5	Y912244-04	Soil	December 13, 2019 12:14	12/13/2019 15:10
Base-5-4	Y912244-05	Soil	December 13, 2019 12:18	12/13/2019 15:10
Base-6-2.5	Y912244-06	Soil	December 13, 2019 12:20	12/13/2019 15:10
Base-7-2	Y912244-07	Soil	December 13, 2019 12:22	12/13/2019 15:10
Base-8-3	Y912244-08	Soil	December 13, 2019 14:05	12/13/2019 15:10

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Trent Watne  
Project Number: 019-2447  
Project: GWOC Schaefer 13-032 HC Spill  
Response

4912244

Chain of Custody

olsson

PROJECT NAME GWOC Schaefer 13-032 HC Spill Response	PROJECT NUMBER 019-2447	LAB USE ONLY: Temperature upon receipt: 1.0 Custody seals in tact: Yes No N/A	DISPOSAL	By Lab	PAGE 1 of 1
COMPANY NAME Olsson	PHONE NUMBER 303-237-2072	Turn Around Time (check) Standard X 72hr 48hr 24hr Same Day			
ADDRESS 1525 Raleigh St, Suite 400	CITY/STATE/ZIP Denver, CO				
PROJECT MANAGER Trent Watne	PM EMAIL twatne@olsson.com				
SAMPLER Mitchell Clark					

  

DIRECT BILL CLIENT?	YES: <input type="checkbox"/> NO: <input checked="" type="checkbox"/>	CLIENT COMPANY:	GWOC
SEND COPY OF ANALYTICAL TO CLIENT?	YES: <input type="checkbox"/> NO: <input checked="" type="checkbox"/>	CLIENT NAME:	
		CLIENT EMAIL:	
		CLIENT PROJECT #:	

  

Lab ID	Field ID	Matrix	Sample Date	Sample Time	Bottles	Notes
	Balc-1-5	Sol	12/13/19	1205	1	X
	Balc-2-6	Sol	12/13/19	1207	1	X
	Balc-3-4	Sol	12/13/19	1209	1	X
	Balc-4-5	Sol	12/15/19	1214	1	X
	Balc-5-4	Sol	12/13/19	1218	1	X
	Balc-6-2.5	Sol	12/15/19	1220	1	X
	Balc-7-2	Sol	12/13/19	1222	1	X
	Balc-8-3	Sol	12/15/19	1405	1	X

  

Comments:	QC PACKAGE (check below)	PRINTED NAME	SIGNATURE	DATE	TIME
	<input checked="" type="checkbox"/> LEVEL II (Standard QC)	Mitchell Clark	[Signature]	12/13/19	1510
	<input type="checkbox"/> LEVEL III (Std QC + form)	Jan Ellis	[Signature]	12/13/19	1510
	<input type="checkbox"/> LEVEL IV (Std QC + form + raw data)				
	<input type="checkbox"/>				

Origins Laboratory, Inc.

Jen Pellegrini

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1525 Raleigh St, Suite 400

Denver CO 80204

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Project Number: 019-2447

Project: GWOC Schaefer 13-032 HC Spill Response

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

## Sample Receipt Checklist

Origins Work Order: Y9N244

Client: Olsson

Client Project ID: GWOC

Checklist Completed by: 12/13/19

Shipped Via: HD  
(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: JP

Airbill #: NA

Matrix(s) Received: (Check all that apply): ☒ Soil/Solid ☐ Water ☐ Other: \_\_\_\_\_

Cooler Number/Temperature: 1 / 1.0 °C \_\_\_\_\_ / \_\_\_\_\_ °C \_\_\_\_\_ / \_\_\_\_\_ °C \_\_\_\_\_ / \_\_\_\_\_ °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO <sub>3</sub> , HCL, H <sub>2</sub> SO <sub>4</sub> ) / (pH >10 for samples preserved with NaAsO <sub>2</sub> +NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)</sup>If NO, then contact the client before proceeding with analysis and note date, time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

12-17-19  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Trent Watne  
Project Number: 019-2447  
Project: GWOC Schaefer 13-032 HC Spill Response

## Base-1-5

12/13/2019 12:05:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y912244-01 (Soil)

### BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.0500	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.0500	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	98.4 %	70-130	"	"	"
Surrogate: Toluene-d8	97.9 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	101 %	70-130	"	"	"

### Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	78.1 %	50-150			"		"	"	

Origins Laboratory, Inc.



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## Base-2-6

12/13/2019 12:07:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y912244-02 (Soil)

### BTEX/TVPH by EPA 8260D

Benzene	ND	0.00200	mg/kg	1	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	108 %	70-130			"	"	"
Surrogate: Toluene-d8	97.2 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130			"	"	"

### Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	85.4 %	50-150			"	"	"		

Origins Laboratory, Inc.



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Response

## Base-3-4

12/13/2019 12:09:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y912244-03 (Soil)

### BTEX/TVPH by EPA 8260D

Benzene	ND	0.00200	mg/kg	1	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	109 %	70-130	"	"	"
Surrogate: Toluene-d8	95.7 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	100 %	70-130	"	"	"

### Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	79.6 %	50-150			"		"	"	

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## Base-4-5

12/13/2019 12:14:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y912244-04 (Soil)

### BTEX/TVPH by EPA 8260D

Benzene	ND	0.00200	mg/kg	1	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	112 %	70-130	"	"	"
Surrogate: Toluene-d8	95.9 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130	"	"	"

### Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	87.7 %	50-150			"		"	"	

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Project: GWOC Schaefer 13-032 HC Spill  
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## Base-5-4

12/13/2019 12:18:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y912244-05 (Soil)

### BTEX/TVPH by EPA 8260D

Benzene	ND	0.00200	mg/kg	1	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130	"	"	"
Surrogate: Toluene-d8	96.9 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	102 %	70-130	"	"	"

### Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	93.5 %	50-150			"		"	"	

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Response

## Base-6-2.5

12/13/2019 12:20:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y912244-06 (Soil)

### BTEX/TVPH by EPA 8260D

Benzene	ND	0.00200	mg/kg	1	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	116 %	70-130	"	"	"
Surrogate: Toluene-d8	95.2 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130	"	"	"

### Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	84.8 %	50-150			"		"	"	

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Denver CO 80204

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Project Number: 019-2447  
Project: GWOC Schaefer 13-032 HC Spill  
Response

## Base-7-2

12/13/2019 12:22:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y912244-07 (Soil)

### BTEX/TVPH by EPA 8260D

Benzene	ND	0.0500	mg/kg	25	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.0500	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.0500	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.0500	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	5.00	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	104 %	70-130			"	"	"
Surrogate: Toluene-d8	98.4 %	70-130			"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"

### Diesel Range Organics (DRO/TEPH) by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	85.7 %	50-150			"	"	"		

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Response

**Base-8-3**

**12/13/2019 2:05:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y912244-08 (Soil)**

**BTEX/TVPH by EPA 8260D**

Benzene	ND	0.00200	mg/kg	1	B9L1601	ZZZ	12/16/2019	12/16/2019	U
Toluene	ND	0.00200	"	"	"	ZZZ	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	ZZZ	"	"	U
Xylenes, total	ND	0.00200	"	"	"	ZZZ	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	ZZZ	"	"	U

Surrogate: 1,2-Dichloroethane-d4	114 %	70-130	"	"	"
Surrogate: Toluene-d8	96.2 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	70-130	"	"	"

**Diesel Range Organics (DRO/TEPH) by EPA 8015D**

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9L1602	KDK	12/16/2019	12/16/2019	U
Surrogate: o-Terphenyl	89.4 %	50-150			"		"	"	

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Response

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9L1601 - EPA 5030 (soil)</b>										
<b>Blank (B9L1601-BLK1)</b>					Prepared: 12/16/2019 Analyzed: 12/16/2019					
Benzene	ND	0.00200	mg/kg							U
Toluene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

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Project Number: 019-2447  
Project: GWOC Schaefer 13-032 HC Spill  
Response

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9L1601 - EPA 5030 (soil)</b>										
<b>LCS (B9L1601-BS1)</b>					Prepared: 12/16/2019 Analyzed: 12/16/2019					
Benzene	0.0999	0.00200	mg/kg	0.100		99.9	70-130			
Toluene	0.103	0.00200	"	0.100		103	70-130			
Ethylbenzene	0.107	0.00200	"	0.100		107	70-130			
m,p-Xylene	0.211	0.00400	"	0.200		106	70-130			
o-Xylene	0.108	0.00200	"	0.100		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		100	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

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**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9L1601 - EPA 5030 (soil)**

Matrix Spike (B9L1601-MS1)		Source: Y912244-02			Prepared: 12/16/2019 Analyzed: 12/16/2019					
Benzene	0.0903	0.00200	mg/kg	0.100	ND	90.3	70-130			
Toluene	0.0891	0.00200	"	0.100	ND	89.1	70-130			
Ethylbenzene	0.0880	0.00200	"	0.100	ND	88.0	70-130			
m,p-Xylene	0.178	0.00400	"	0.200	ND	89.0	70-130			
o-Xylene	0.0916	0.00200	"	0.100	ND	91.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.8	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager



Olsson Associates  
1525 Raleigh St, Suite 400  
Denver CO 80204

Trent Watne  
Project Number: 019-2447  
Project: GWOC Schaefer 13-032 HC Spill  
Response

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B9L1601 - EPA 5030 (soil)**

Matrix Spike Dup (B9L1601-MSD1)		Source: Y912244-02			Prepared: 12/16/2019 Analyzed: 12/16/2019					
Benzene	0.101	0.00200	mg/kg	0.100	ND	101	70-130	11.7	20	
Toluene	0.0974	0.00200	"	0.100	ND	97.4	70-130	8.92	20	
Ethylbenzene	0.0975	0.00200	"	0.100	ND	97.5	70-130	10.2	20	
m,p-Xylene	0.199	0.00400	"	0.200	ND	99.3	70-130	10.9	20	
o-Xylene	0.0988	0.00200	"	0.100	ND	98.8	70-130	7.56	20	
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		110	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		98.6	70-130			

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Response

**Volatile Organic Compounds by GC/MS SW846 8260D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9L1602 - EPA 3580

Blank (B9L1602-BLK1)

Prepared: 12/16/2019 Analyzed: 12/16/2019

Diesel (C10-C28)	ND	25.0	mg/kg							U
Surrogate: o-Terphenyl	21		"	25.0		83.3	50-150			

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Project: GWOC Schaefer 13-032 HC Spill  
Response

Extractable Petroleum Hydrocarbons by 8015D - Quality Control  
Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9L1602 - EPA 3580

LCS (B9L1602-BS1)

Prepared: 12/16/2019 Analyzed: 12/16/2019

Diesel (C10-C28)	964	50.0	mg/kg	1000		96.4	70-130			
Surrogate: o-Terphenyl	44		"	50.0		87.7	50-150			

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Response

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9L1602 - EPA 3580

Matrix Spike (B9L1602-MS1)		Source: Y912244-02			Prepared: 12/16/2019 Analyzed: 12/16/2019					
Diesel (C10-C28)	1020	50.0	mg/kg	1000	ND	102	70-130			
Surrogate: o-Terphenyl	48		"	50.0		96.5	50-150			

Origins Laboratory, Inc.



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Response

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B9L1602 - EPA 3580

Matrix Spike Dup (B9L1602-MSD1)		Source: Y912244-02			Prepared: 12/16/2019 Analyzed: 12/16/2019					
Diesel (C10-C28)	972	50.0	mg/kg	1000	ND	97.2	70-130	4.38	35	
Surrogate: o-Terphenyl	46		"	50.0		92.5	50-150			

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Project Number: 019-2447

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Response

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

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