



June 9, 2016

Mr. Scot A. Donato
Great Western Operating Company, LLC
1801 Broadway, Suite 500
Denver, Colorado 80202

**RE: Simpson #1 Tank Battery
Quarterly Groundwater Sampling
Weld County, Colorado
Olsson Project #015-3445**

Dear Mr. Donato,

Great Western Operating Company, LLC (GWOC) retained Olsson Associates (Olsson) to complete the second quarterly groundwater sampling event at the Simpson #1 Tank Battery (Site) located in the northeast quarter of the northeast quarter of Section 15, Township 6 North, Range 67 West. Olsson conducted the groundwater sampling activities on April 21, 2016. The activities were conducted in accordance with the Colorado Oil and Gas Conservation Commission (COGCC) Form 27 Site Investigation and Remediation Workplan approved in December 2015. This letter summarizes the project activities and analytical results.

The Site is an active oil and gas production facility located in an agricultural area, approximately 1,000 feet south of the intersection of County Roads 21 and 70 in Weld County, Colorado. Based on local topography groundwater is expected to flow to the southwest toward a ravine in place on the south side of the Site. According to the Colorado Division of Water Resources, the nearest domestic water well is located a quarter mile northeast and hydraulically up-gradient from the Site. Figure 1 illustrates the general location of the Site.

Groundwater Sampling Methods and Analytical Results

After recording the measured groundwater elevation, Olsson personnel purged monitoring well MW-1 of a minimum of three casing volumes of groundwater and sediment utilizing a dedicated polyethylene bailer and nylon cord. Groundwater was encountered at a depth of 15.34 feet below the top of the PVC well casing. During this project, Olsson personnel followed sampling procedures, equipment decontamination methods, and chain-of-custody procedures in accordance with U.S. Environmental Protection Agency (EPA) guidelines.

Following well purging, Olsson collected a groundwater sample from monitoring well MW-1 and delivered the sample to Origins Laboratory, Inc. (Origins) in Denver, Colorado for analysis. Origins analyzed the groundwater sample for BTEX using EPA Method 8260C. The groundwater analytical results are summarized on Figure 2 and are included in Table 1. The laboratory analytical report is included as Appendix A.

Table 1
Simpson #1 Tank Battery
Groundwater Analytical Summary
Weld County, Colorado

Sample Number	Sample Date	BTEX (µg/L)			
		Benzene	Toluene	Ethylbenzene	Total Xylenes
COGCC Table 910-1 Concentration Levels		5	1000	700	10,000
MW-1	1/28/2016	ND	ND	ND	ND
MW-1	4/21/2016	ND	ND	ND	ND

COGCC, 900 Series, Exploration and Production Waste Management, Table 910-1, Concentration Levels, February 1, 2014

BTEX - Benzene, toluene, ethylbenzene, total xylenes

µg/L - Micrograms per liter

ND - Sample not reported above laboratory reporting limit

Based on the analytical results, BTEX concentrations were not detected at or above laboratory reporting limits, and were below their respective COGCC Table 910-1 concentrations in the groundwater sample from monitoring well MW-1. The next quarterly sampling event is scheduled for July 2016.

Olsson Associates appreciates the opportunity to assist GWOC in performing groundwater monitoring at this Site. If you have any questions or require further information, please call us at 303.237.2072.

Sincerely,

Olsson Associates, Inc.

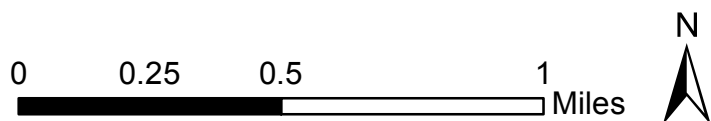
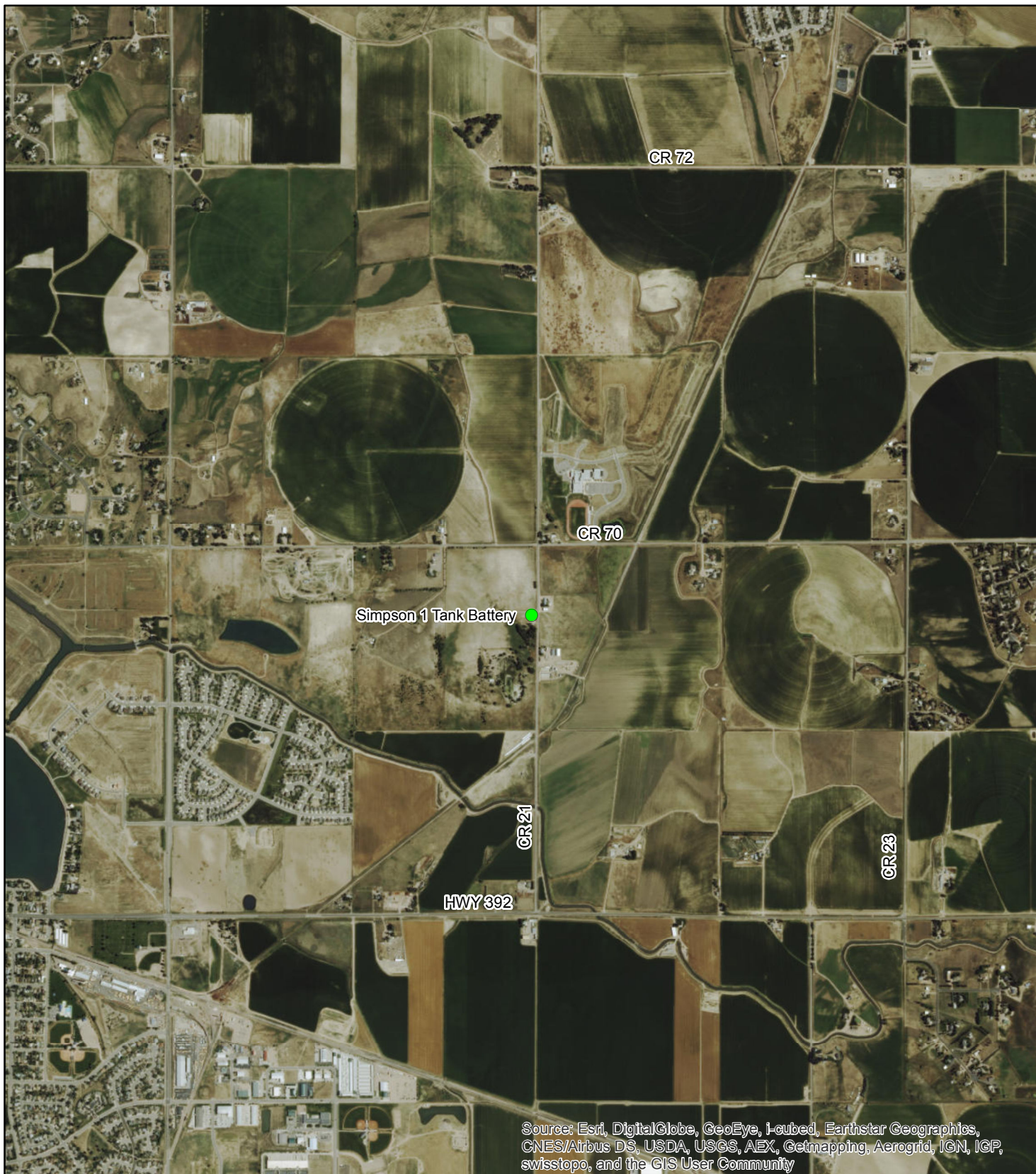


Brendan Cook
Associate Geologist



Jason Davidson, PG
Project Geologist

FIGURES



PROJECT: 015-3445
 DRAWN BY: BPC
 DATE: February 24, 2016

Simpson 1 Tank Battery
 NENE 15 T6N R67W
 Weld County, Colorado

OLSSON
 ASSOCIATES

FIGURE
 1



PROJECT NO: 015-3445

DRAWN BY: BPC

DATE: 05/17/2016

Simpson #1 Tank Battery, Weld County, Colorado
Monitoring Well Location and Groundwater Analytical Results
April 21, 2016
NENE S15 T6N R67W

OLSSON
ASSOCIATES

4690 Table Mountain Drive
Suite 200
Golden, CO 80403
TEL 303-237-2072
FAX 303-237-2659

FIGURE

2

APPENDIX A

LABORATORY ANALYTICAL REPORT



April 28, 2016

Olsson Associates

Jason Davidson

4690 Table Mountain Drive

Golden

CO 80403

Project Name - Simpson 1

Project Number - 015-3445

Attached are your analytical results for Simpson 1 received by Origins Laboratory, Inc. April 21, 2016. This project is associated with Origins project number X604241-01.

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



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

Olsson Associates

4690 Table Mountain Drive

Golden CO 80403

Jason Davidson

Project Number: 015-3445

Project: Simpson 1

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	X604241-01	Water	April 21, 2016 12:17	04/21/2016 14:09

Origins Laboratory, Inc.



The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jason Davidson
Project Number: 015-3445
Project: Simpson 1

ORIGINS

LABORATORY, INC

www.originslaboratory.com

X604241

page 1 of 1

Client:

Olsson Associates

Project Manager:

Jason Davidson

Address:

4690 Tabern Mountain Drive, Suite 200 Golden, CO 80403

Project Name:

Simpson + Quarterly Monitoring

Telephone Number:

303.596.5693

Project Number:

015-3445

Email Address:

Paige Koutelas

Samples Collected By:

Paige Koutelas

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summary #		
MW-1	4/21/16	1217	3	X	X			X			BTEX	1
												2
												3
												4
												5
												6
												7
												8
												9
												10
Relinquished By:	Date: 4/21/16	Time: 1409	Received By:	Date: 4/21/16	Time: 1409	Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input type="checkbox"/> Standard <input checked="" type="checkbox"/>						
Relinquished By:	Date:	Time:	Received By:	Date:	Time:							

Date Results Needed

3.7

Origins Laboratory, Inc.

Jeff Pellipini

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Olsson Associates
4690 Table Mountain Drive
Golden CO 80403

Jason Davidson
Project Number: 015-3445
Project: Simpson 1

Origins Laboratory

F-012207-01-R1
Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: X604241

Client: Olsson + Assoc.

Client Project ID: Simpson 1

Checklist Completed by: Jeff Smith

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

Date/time completed: 4/22/16

Airbill #: NA

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

Cooler Number/Temperature: 1 / 37 °C 1 °C 1 °C (Describe) 1 °C

Thermometer ID: TC05

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water — is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (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 ₃ , HCL, H ₂ SO ₄) / (pH >10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HCL
Additional Comments (if any):				

⁽¹⁾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) Jeff Smith

4/22/16
Date/Time Reviewed

Origins Laboratory, Inc.

Jeff Pellegrini

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Olsson Associates
4690 Table Mountain Drive
Golden CO 80403

Jason Davidson
Project Number: 015-3445
Project: Simpson 1

MW-1

4/21/2016 12:17:00PM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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Origins Laboratory, Inc. X604241-01 (Water)

BTEX by EPA 8260C

Benzene	ND	1.0	ug/L	1	B6D2602	04/26/2016	04/27/2016	U
Toluene	ND	1.0	"	"	"	"	"	U
Ethylbenzene	ND	1.0	"	"	"	"	"	U
Xylenes, total	ND	1.0	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	95.7 %	84-121			"	"	"
Surrogate: Toluene-d8	99.0 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	99.6 %	84-114			"	"	"

Origins Laboratory, Inc.



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Olsson Associates
4690 Table Mountain Drive
Golden CO 80403

Jason Davidson
Project Number: 015-3445
Project: Simpson 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B6D2602 - EPA 5030B (Water)										
Blank (B6D2602-BLK1)					Prepared: 04/26/2016 Analyzed: 04/27/2016					
Benzene	ND	1.0	ug/L							U
Toluene	ND	1.0	"							U
Ethylbenzene	ND	1.0	"							U
Xylenes, total	ND	1.0	"							U
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		96.3	84-121			
Surrogate: Toluene-d8	60		"	62.5		96.6	85-115			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		98.0	84-114			

Origins Laboratory, Inc.



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4690 Table Mountain Drive
Golden CO 80403

Jason Davidson
Project Number: 015-3445
Project: Simpson 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B6D2602 - EPA 5030B (Water)										
LCS (B6D2602-BS1)					Prepared: 04/26/2016 Analyzed: 04/27/2016					
Benzene	43.3	1.0	ug/L	50.0		86.7	73.3-129			
Toluene	44.0	1.0	"	50.0		88.0	76.2-123			
Ethylbenzene	44.4	1.0	"	50.0		88.8	73.6-130			
m,p-Xylene	89.7	2.0	"	100		89.7	76.1-126			
o-Xylene	43.8	1.0	"	50.0		87.5	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.8	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.2	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

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Jason Davidson
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Project: Simpson 1

Volatile Organic Compounds by GC/MS SW846 8260C - 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 B6D2602 - EPA 5030B (Water)

Matrix Spike (B6D2602-MS1)		Source: X604253-02			Prepared: 04/26/2016 Analyzed: 04/28/2016					
Benzene	40.5	1.0	ug/L	50.0	ND	81.0	74-130			
Toluene	41.0	1.0	"	50.0	ND	82.0	73-131			
Ethylbenzene	43.6	1.0	"	50.0	ND	87.2	76-132			
m,p-Xylene	85.5	2.0	"	100	ND	85.5	69-139			
o-Xylene	41.0	1.0	"	50.0	ND	82.0	74-131			
Surrogate: 1,2-Dichloroethane-d4	59		"	62.5		94.5	84-121			
Surrogate: Toluene-d8	61		"	62.5		98.2	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

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4690 Table Mountain Drive
Golden CO 80403

Jason Davidson
Project Number: 015-3445
Project: Simpson 1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B6D2602 - EPA 5030B (Water)										
Matrix Spike Dup (B6D2602-MSD1)	Source: X604253-02				Prepared: 04/27/2016 Analyzed: 04/27/2016					
Benzene	47.5	1.0	ug/L	50.0	ND	95.1	74-130	16.0	20	QR-03
Toluene	50.2	1.0	"	50.0	ND	100	73-131	20.1	20	
Ethylbenzene	49.7	1.0	"	50.0	ND	99.3	76-132	13.0	20	
m,p-Xylene	97.9	2.0	"	100	ND	97.9	69-139	13.6	20	
o-Xylene	47.4	1.0	"	50.0	ND	94.7	74-131	14.4	20	
Surrogate: 1,2-Dichloroethane-d4	64		"	62.5		102	84-121			
Surrogate: Toluene-d8	63		"	62.5		101	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	84-114			

Origins Laboratory, Inc.



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Jason Davidson
Project Number: 015-3445
Project: Simpson 1

Notes and Definitions

U Sample is Non-Detect.

QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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