



June 26, 2019

Mr. Paul Herring  
Top Operating Co.  
3609 Wadsworth Blvd. Ste 340  
Lakewood, CO 80235

**Quarterly Progress Report – 2<sup>nd</sup> Quarter 2019**  
**Rider #1**  
**Historical Release**  
**40.178822 / -105.058512**  
**NE¼ SE¼ SEC.36 T3N R69W 6PM**  
**Boulder County, Colorado**  
**Remediation # 11300**

Dear Mr. Herring,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present this Quarterly Progress Report – 2<sup>nd</sup> Quarter 2019 for the Rider #1 location (site). A topographic site location map is presented in Figure 1.

## **1.0 SITE BACKGROUND**

On December 21, 2017, the City of Longmont (Longmont) submitted to the Colorado Oil and Gas Conservation Commission (COGCC) a report entitled *Limited Soil, Groundwater, and Soil Gas Investigation* for the Rider #1 Oil and Gas Well Site located in Longmont, Colorado. Based on analytical results reported by Longmont, soil and groundwater samples collected by Terracon Consultants, Inc. (Terracon) on September 15, 2017 and October 18, 2017, exceeded COGCC Table 910-1 regulatory limits. These results were reported by Longmont to the COGCC on December 21, 2017 and were first reported to Top Operating Company (TOP) upon issuance of Notice of Alleged Violation (NOAV) on March 5, 2018.

In April 2018, EAGLE was retained by TOP to perform assessment activities at the site in response to Longmont's report (COGCC Document No. 2496197) and the NOAV (COGCC Document No. 401562368). Terracon's report indicated 11 soil borings were advanced at the site in September and October, 2017. Based on analytical results of soil samples collected by Terracon, total petroleum hydrocarbons (TPH) concentrations in soil borings SB-06, SB-07, and SB-11 exceeded COGCC Table 910-1 regulatory limits. Based on these results, and at the request of TOP, EAGLE advanced 13 soil borings adjacent to the previous locations of SB-06, SB-07, and SB-11 in May 2018. EAGLE submitted two soil samples from each boring at different depths (surficial and subsurface) for laboratory analysis. Based on laboratory analytical results, soil samples SB-03@7.5-10', SB-07@7.5-10', and SB-11@7.5-10' contained concentrations of TPH exceeding the COGCC Table 910-1 regulatory limit of 500 milligrams per kilogram (mg/kg). Soil analytical results from EAGLE's soil boring assessment are presented in Table 1.

From August 13, 2018 through August 28, 2018, EAGLE supervised excavation activities to remove adsorbed petroleum hydrocarbon impacts beneath and adjacent to the petroleum hydrocarbon impacts identified in soil borings SB-03, SB-07, and SB-11. On August 13, 2018, groundwater was observed

within the excavation at approximately 9 to 9.5 feet bgs. EAGLE collected groundwater samples (EXC-GW-01 and EXC-GW-02) on August 13, 2018, placed the samples in an iced cooler, and delivered to Origins Laboratory (Origins), under standard chain-of-custody (COC) protocol, for analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX) following modified Environmental Protection Agency (EPA) Method 8260C. The groundwater samples were received within the required holding time for the laboratory analysis. On August 16, 2018, EAGLE collected groundwater sample EXC-GW-03 for laboratory analysis. Soil sample locations and analytical data for soil excavation samples is summarized in Table 1 and presented in Figure 2.

To aid in the remediation of impacted groundwater, EC Trucking, coordinated through Wright Choice, was utilized to remove groundwater from the excavation. From August 20, 2018 through August 28, 2018, approximately 1,700 barrels (bbls) of groundwater were removed from the excavation by EC Trucking and transported to NGL C9 for disposal. Additional groundwater samples EXC-GW-04 and EXC-GW-05 were collected to monitor dissolved BTEX concentrations in the excavation.

During excavation activities, previously installed monitoring wells MW-01R, MW-03R, and MW-04R were destroyed. The following narrative details monitoring well replacement and groundwater monitoring activities completed at the site following excavation activities.

Per a Site Investigation and Remediation Workplan - Form 27 (COGCC Document No. 401748617) submitted to the COGCC on August 29, 2018, EAGLE proposed the installation of replacement monitoring well MW-01R to continue monitoring groundwater concentrations at the site. Following Form 27 approval on August 29, 2018, EAGLE scheduled soil boring advancement and monitoring well installation activities.

On October 2, 2018, soil boring (MW-01R2) was advanced adjacent to the previous monitoring well MW-01R location. Following advancement activities, the soil boring was completed as a 2-inch, groundwater monitoring well to continue monitoring groundwater concentrations at the site per the approved Form 27. Soil boring advancement/monitoring well installation activities were completed by EAGLE using a 7822DT Series Geoprobe track rig.

Based on photoionization detector (PID) readings, the soil sample with the highest organic vapor measurement (OVM) from the boring (MW-01R2@7.5-10') was submitted to Origins, following standard COC procedures, for laboratory analysis of BTEX, naphthalene, TPH – gasoline range organics (GRO), and TPH – diesel range organics (DRO), following modified EPA Methods 8260C and 8015.

Based on laboratory analytical results, the soil sample collected from monitoring wells MW-01R2 on October 2, 2018, 2018 did not contain concentrations of BTEX, naphthalene, or TPH exceeding applicable COGCC Table 910-1 regulatory limits. Monitoring well soil analytical results are summarized in Table 1 and presented in Figure 3.

EAGLE returned to the site on October 3, 2018 to sample monitoring well MW-01R2. Groundwater samples were collected from the monitoring well in 40 milliliter (mL) amber vials and submitted for laboratory analysis of BTEX following EPA Method 8260C.

Based on laboratory analytical results, the groundwater sample collected from monitoring well MW-01R2 on October 3, 2018 did not contain concentrations of BTEX exceeding applicable COGCC Table 910-1 regulatory limits.

Top Operating Company submitted a Site Investigation and Remediation Workplan – Form 27 (COGCC Document No. 401799000) presenting soil and groundwater data associated with the installation of MW-01R2 to the COGCC on October 16, 2018. In addition, the Form 27 proposed quarterly monitoring of MW-01R2.

On March 30, 2019, Top Operating Company submitted a Site Investigation and Remediation Workplan (Supplemental) – Form 27 (COGCC Document No. 401989550) presenting groundwater data collected during the 2<sup>nd</sup> quarter 2019.

## **1.1 Site Hydrogeology**

The soil lithology observed beneath the site consists of stiff, silty clay from the ground surface to approximately 13 feet below ground surface (bgs), underlain by medium dense, gravelly clay from approximately 13 to 15 feet bgs. Groundwater was observed at a depth of approximately 9 to 9.5 feet bgs during initial assessment and excavation activities. Groundwater was observed at approximately 9 feet bgs during groundwater sampling activities.

## **2.0 GROUNDWATER MONITORING ACTIVITIES**

### **2.1 Groundwater Sampling Procedures**

EAGLE completed the 2<sup>nd</sup> quarter 2019 groundwater sampling event on April 19, 2019. EAGLE collected a groundwater sample from monitoring well MW-01R2. Prior to groundwater sample collection, depth to groundwater data was collected using a decontaminated interface probe capable of measuring the depth to groundwater or light non-aqueous phase liquid (LNAPL) to an accuracy of 0.01 feet. Groundwater was observed at approximately 9.9 feet bgs. Groundwater samples were collected from the monitoring well in 40 mL amber vials and submitted for laboratory analysis of BTEX following EPA Method 8260C. The samples were transported in an iced cooler under standard chain-of-custody procedures to Origins and were received within the required holding time.

### **2.2 Groundwater Laboratory Analytical Results**

Based on laboratory analytical results, the groundwater sample collected from monitoring well MW-01R2 on April 19, 2019 did not contain concentrations of BTEX exceeding applicable COGCC Table 910-1 regulatory limits.

Groundwater analytical results are summarized in Table 2 and presented in Figure 4. The groundwater laboratory analytical report is included in Attachment A.

### **3.0 RECOMMENDATIONS**

Based on the information presented in this report, EAGLE recommends continued quarterly groundwater monitoring on MW-01R2 through the 3<sup>rd</sup> quarter 2019.

EAGLE sincerely appreciates the opportunity to provide our services. If you have any questions or require further information, please contact us at (303) 433-0479.

Sincerely,

***EAGLE ENVIRONMENTAL CONSULTING, INC.***

A handwritten signature in blue ink, appearing to read 'D. Coloccia', is positioned above the printed name.

Daniel Coloccia  
Project Scientist

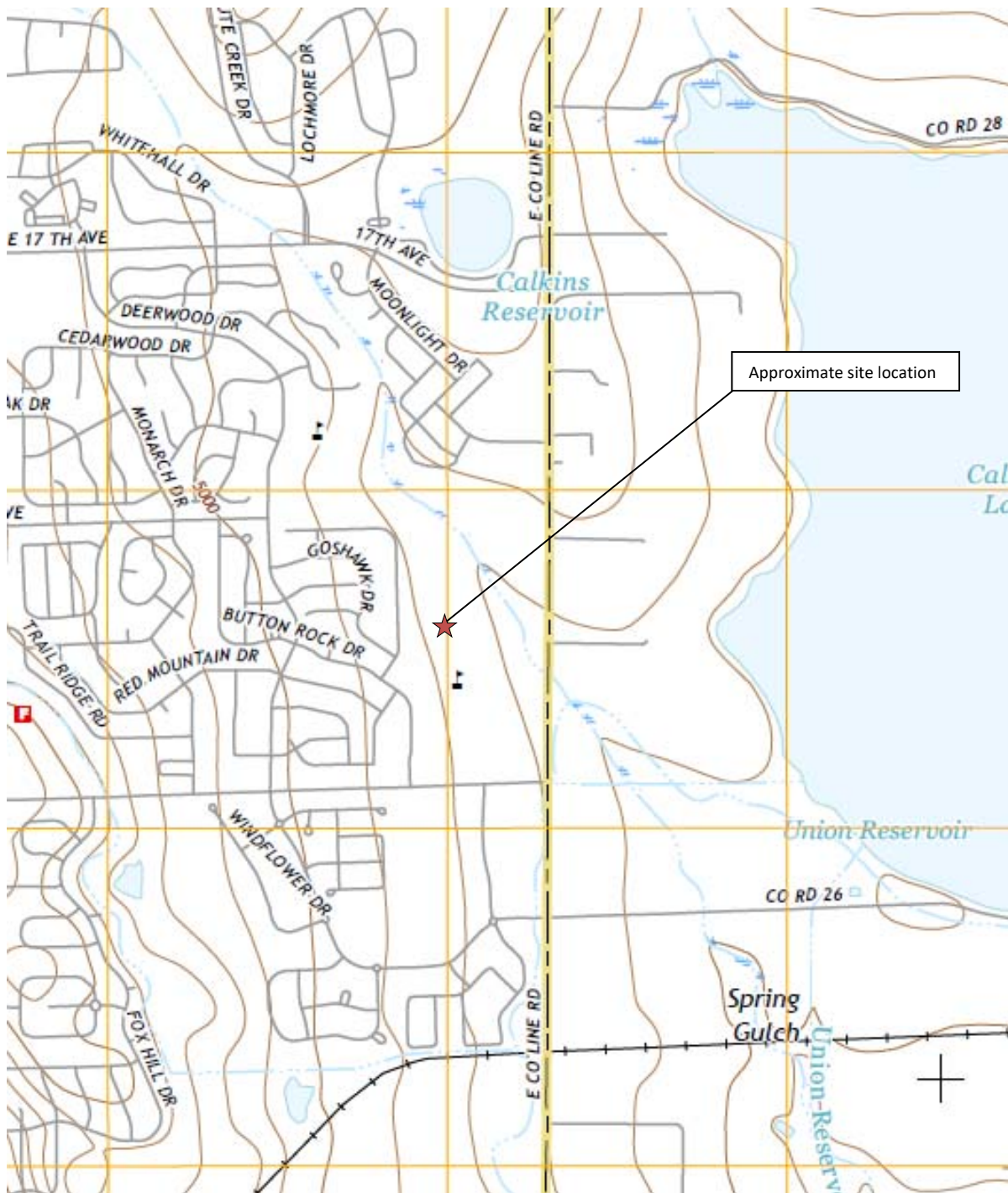
## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Excavation Soil Analytical Map**

**Figure 3: Monitoring Well Soil Analytical Map**

**Figure 4: Groundwater Analytical Map**



**Topographic Site Location Map**

Rider #1

Historical Release

40.178822 / -104.058512

NE¼ SE¼ SEC.36 T3N R69W 6PM

Boulder County, Colorado

Remediation #11300

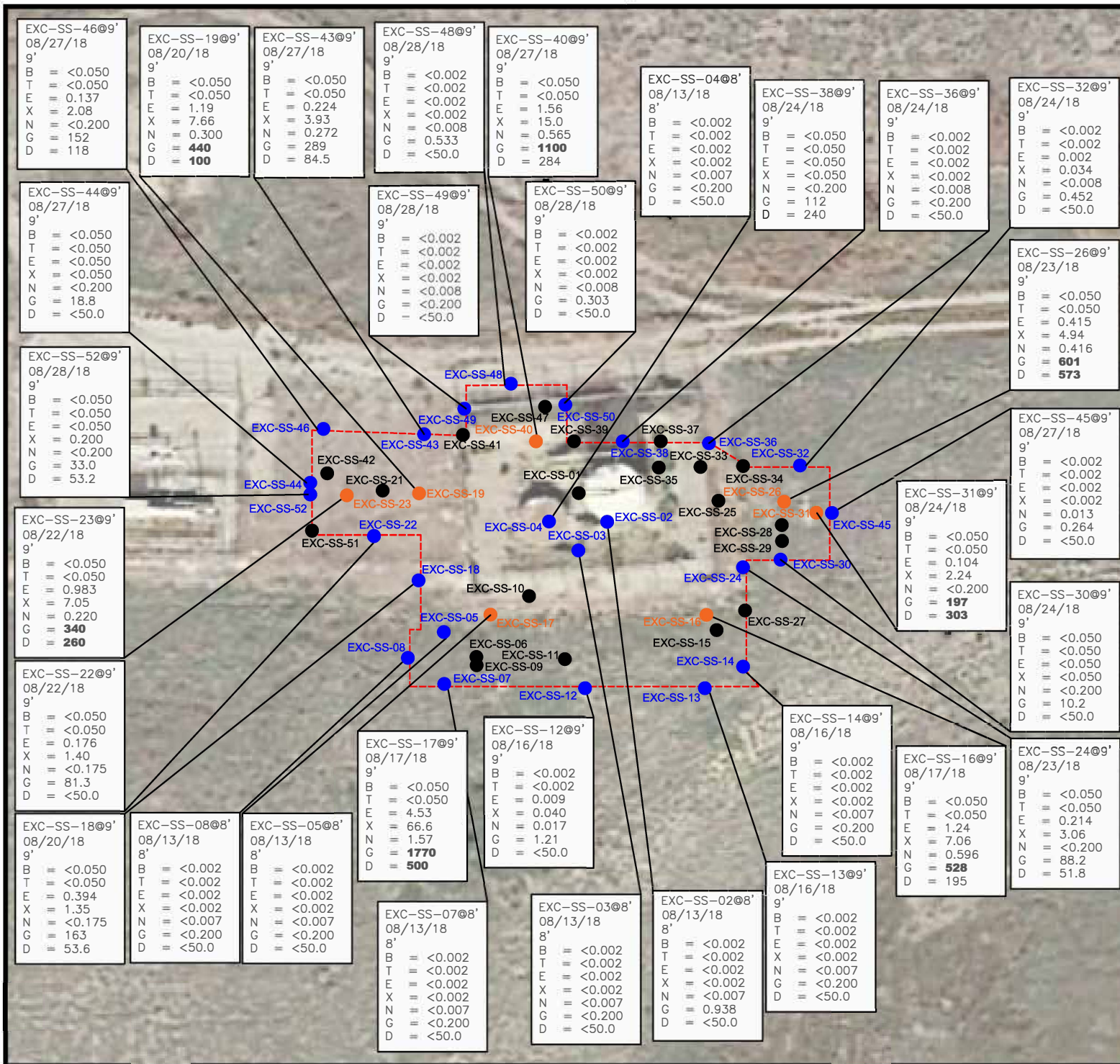


Source: USGS 7.5 Minute Topographic Map, Longmont, CO Quadrangle 2016

**Figure 1**



**EAGLE**  
ENVIRONMENTAL  
CONSULTING, INC.



#### LEGEND

--- APPROXIMATE EXCAVATION BOUNDARIES

- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES ABOVE COGCC TABLE 910-1 - IMPACTS REMOVED
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES BELOW COGCC TABLE 910-1
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD ANALYZED WITH PHOTOIONIZATION DETECTOR (PID)

#### PARAMETERS

SOIL SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
N = NAPHTHALENE (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM

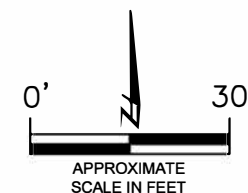
TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

NOTE: VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY DETECTION LIMITS

VALUES PRESENTED IN **BOLD** TYPEFACE EXCEED COGCC TABLE 910-1 REGULATORY LIMITS FOR THE COMPOUND

COGCC - COLORADO OIL AND GAS CONSERVATION COMMISSION



#### EXCAVATION SOIL ANALYTICAL MAP

RIDER #1  
HISTORICAL RELEASE  
40.178822 / -105.058512  
NE1/4 SE1/4 SEC.36 T3N R69W 6PM  
BOULDER COUNTY, COLORADO  
REMEDIATION # 11300

DATE:  
08/29/18

DRAWN BY:  
or

FIG.  
NO. 2



**EAGLE**  
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4101 INCA STREET, DENVER, CO 80211  
Ph: 303-433-0479 F: 303-325-5449



MW-01R2@7.5-10'  
10/02/18  
7.5-10'  
B = <0.002  
T = <0.002  
E = <0.002  
X = <0.002  
N = <0.008  
G = 0.352  
D = <50.0

MW-01R2

#### LEGEND

--- APPROXIMATE EXCAVATION BOUNDARIES



APPROXIMATE REPLACEMENT MONITORING WELL LOCATION

#### PARAMETERS

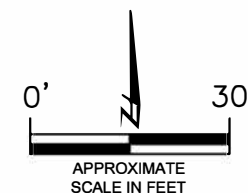
SOIL SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
N = NAPHTHALENE (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS

NOTE: VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY DETECTION LIMITS



MONITORING WELL SOIL ANALYTICAL MAP  
RIDER #1  
HISTORICAL RELEASE  
40.178822 / -105.058512  
NE1/4 SE1/4 SEC.36 T3N R69W 6PM  
BOULDER COUNTY, COLORADO  
REMEDATION # 11300

DATE:  
10/10/18

DRAWN BY:  
or

FIG.  
NO. 3



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# LEGEND

--- APPROXIMATE EXCAVATION BOUNDARIES



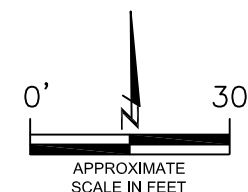
APPROXIMATE REPLACEMENT MONITORING WELL LOCATION

## PARAMETERS

SAMPLE LOCATION	DATE
B = BENZENE (µg/L)	
T = TOLUENE (µg/L)	
E = ETHYLBENZENE (µg/L)	
X = TOTAL XYLENES (µg/L)	

µg/L = MICROGRAMS PER LITER

VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE LABORATORY REPORTING LIMITS.

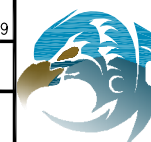


GROUNDWATER ANALYTICAL MAP  
RIDER #1  
HISTORICAL RELEASE  
40.178822 / -105.058512  
NE1/4 SE1/4 SEC.36 T3N R69W 6PM  
BOULDER COUNTY, COLORADO  
REMEDIAION # 11300

DATE:  
04/19/19

DRAWN BY:  
or

FIG.  
NO. 4



**EAGLE**  
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Ph: 303-433-0479 • F: 303-325-5449

## **TABLES**

**Table 1:     Soil Analytical Results Summary**

**Table 2:     Groundwater Analytical Results Summary**

**TABLE 1**  
**SOIL ANALYTICAL RESULTS SUMMARY**  
**RIDER #1**  
**HISTORICAL RELEASE**  
**40.178822 / -105.058512**  
**NE¼ SE¼ SEC.36 T3N R69W 6PM**  
**BOULDER COUNTY, COLORADO**  
**REMEDATION #11300**

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-RRO (mg/kg)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
<b>COGCC - Regulatory Limits (Table 910-1) (mg/kg)</b>			<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>23</b>	<b>500</b>			<b>&lt;4</b>	<b>6 to 9</b>	<b>&lt;12</b>
SB-01@0-2.5' (40.178806/-105.058722)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.135	8.32	0.62
SB-01@10-12.5' (40.178806/-105.058722)	05/17/18	10-12.5	<0.050	<0.050	<0.050	0.658	<0.175	101	24.4	5.32	NA	NA	NA
SB-02@0-2.5' (40.178782/-105.058673)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.239	7.97	1.40
SB-02@7.5-10' (40.178782/-105.058673)	05/17/18	7.5-10	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<13.0	<4.59	NA	NA	NA
SB-03@0-2.5' (40.178756/-105.058741)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.196	7.65	0.49
SB-03@7.5-10' (40.178756/-105.058741)	05/17/18	7.5-10	<0.050	<0.050	<0.050	4.63	0.448	<b>425</b>	<b>95.0</b>	<4.59	NA	NA	NA
SB-04@0-2.5' (40.178778/-105.058722)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.187	7.99	0.46
SB-04@7.5-10' (40.178778/-105.058722)	05/17/18	7.5-10	<0.050	<0.050	0.194	0.772	<0.175	101	18.8	<4.59	NA	NA	NA
SB-05@7.5-10' (40.178827/-105.058516)	05/17/18	7.5-10	<0.002	<0.002	0.007	0.057	<0.007	12.5	59.0	<4.59	NA	NA	NA
SB-06@0-2.5' (40.178845/-105.058516)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.178	8.21	4.07
SB-06@7.5-10' (40.178845/-105.058516)	05/17/18	7.5-10	<0.002	0.002	0.661	7.90	0.184	295	70.9	<4.59	NA	NA	NA
SB-07@0-2.5' (40.178826/-105.058485)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.113	8.73	2.62
SB-07@7.5-10' (40.178826/-105.058485)	05/17/18	7.5-10	<0.050	<0.050	1.97	30.1	0.650	<b>877</b>	156	<4.59	NA	NA	NA
SB-08@0-2.5' (40.178805/-105.058517)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.113	8.74	3.80
SB-08@7.5-10' (40.178805/-105.058517)	05/17/18	7.5-10	<0.050	<0.050	0.098	1.46	0.212	196	37.8	<4.59	NA	NA	NA
SB-09@0-2.5' (40.178821/-105.058550)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.144	8.65	1.35



TABLE 1  
SOIL ANALYTICAL RESULTS SUMMARY  
RIDER #1  
HISTORICAL RELEASE  
40.178822 / -105.058512  
NE¼ SE¼ SEC.36 T3N R69W 6PM  
BOULDER COUNTY, COLORADO  
REMEDATION #11300

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-RRO (mg/kg)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
<b>COGCC - Regulatory Limits (Table 910-1) (mg/kg)</b>			<b>0.17</b>	<b>85</b>	<b>100</b>	<b>175</b>	<b>23</b>	<b>500</b>			<b>&lt;4</b>	<b>6 to 9</b>	<b>&lt;12</b>
SB-09@7.5-10' (40.178821/-105.058550)	05/17/18	7.5-10	<0.002	<0.002	0.027	0.174	0.017	10.9	16.2	<4.59	NA	NA	NA
SB-10@0-2.5' (40.178853/-105.058453)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.181	8.42	2.59
SB-10@10-12.5' (40.178853/-105.058453)	05/17/18	10-12.5	<0.050	<0.050	0.787	29.2	0.331	286	61.5	<4.59	NA	NA	NA
SB-11@0-2.5' (40.178672/-105.058327)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.285	8.20	2.23
SB-11@7.5-10' (40.178672/-105.058327)	05/17/18	7.5-10	<0.050	<0.050	<0.050	4.57	0.290	<b>847</b>	68.5	<4.59	NA	NA	NA
SB-12@0-2.5' (40.178674/-105.058974)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.113	8.65	0.24
SB-12@10-12.5' (40.178674/-105.058974)	05/17/18	10-12.5	<0.002	<0.002	<0.002	<0.002	<0.007	10.6	47.5	<4.59	NA	NA	NA
SB-13@0-2.5' (40.179119/-105.058492)	05/17/18	0-2.5	NA	NA	NA	NA	NA	NA	NA	NA	0.0992	8.65	0.47
SB-13@12.5-15' (40.179119/-105.058492)	05/17/18	12.5-15	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<13.0	<4.59	NA	NA	NA
COGCC = Colorado Oil and Gas Conservation Commission      mg/kg = milligrams per kilogram      NA - Not Applicable TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics Values presented in <b>bold</b> indicate concentrations exceeded COGCC Table 910-1 regulatory limits. Values presented with a "<" symbol indicate concentrations were not observed above the laboratory reporting limit.													



TABLE 2  
GROUNDWATER ANALYTICAL RESULTS SUMMARY  
RIDER #1  
HISTORICAL RELEASE  
40.178822 / -105.058512  
NE¼ SE¼ SEC.36 T3N R69W 6PM  
WELD COUNTY, COLORADO  
REMEDATION #11300

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
<b>COGCC Table 910-1 Regulatory Limits (µg/L)</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1400</b>
MW-01R2 (40.178764 / -105.058722)	05/17/18	<4.00	<4.00	27.4	180
	01/14/19	<4.00	<4.00	<4.00	<4.00
	04/19/19	<1.00	<1.00	<1.00	<1.00
COGCC = Colorado Oil and Gas Conservation Commission µg/L - micrograms per liter Note: Values presented with a less than symbol (<) indicate concentrations were not observed at or above the laboratory reporting limit.					

## **ATTACHMENT A**

### **Laboratory Analytical Report**



April 23, 2019

Eagle Environmental Consulting, Inc.

Dan Coloccia

4101 Inca Street

Denver

CO 80211

**Project Name - Top-Rider #1**

**Project Number - [none]**

Attached are your analytical results for Top-Rider #1 received by Origins Laboratory, Inc. April 19, 2019. This project is associated with Origins project number Y904353-01.

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

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: Top-Rider #1

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01R2	Y904353-01	Water	April 19, 2019 9:30	04/19/2019 15:45

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.*

Jen Pellegrini For Noelle Doyle Mathis, President

Dan Coloccia  
Project Number: [none]  
Project: Top-Rider #1

# ORIGINS

LABORATORY, INC

www.originslaboratory.com

page 1 of 1

Client: Eagle  
 Address: 4101 Inca Street  
Denver CO 80111  
 Telephone Number: 303 433 0479  
 Email Address: debaccia@eagle-enviro.com

Project Manager: Daniel Cobaccia  
 Project Name: TOP-RIDER #1  
 Project Number: \_\_\_\_\_  
 Samples Collected By: JG

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis	Sample Instructions	
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #			Other
MW-01R2	4-19-19	0930	3	X				X					1
								X					2
													3
													4
													5
													6
													7
													8
													9
													10
Relinquished By: <u>John Chumak</u>	Date: <u>4-19-2019</u>	Time: <u>1545</u>		Received By: <u>[Signature]</u>				Date: <u>4/19/19</u>	Time: <u>1545</u>	Turnaround Time: <input type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input checked="" type="checkbox"/> 72 Hr <input type="checkbox"/> Standard			
Relinquished By: _____	Date: _____	Time: _____		Received By: _____				Date: _____	Time: _____				

Fax: 303.265.9645

Phone: 303.433.1322

Denver, CO 80211

1725 Elk Place

Temp Received- 1.6

Date Results Needed

Origins Laboratory, Inc.

Jeff Pellipini

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver

CO

80211

Dan Coloccia

Project Number: [none]

Project: Top-Rider #1

Origins Laboratory

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

## Sample Receipt Checklist

Origins Work Order: Y904353

Client: Eagle

Client Project ID: Top Rider #1

Checklist Completed by: JG

Shipped Via: HD

(UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 4/19/2019

Airbill #: N/A

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

(Describe)

Cooler Number/Temperature: 1 / 1.6 °C / °C / °C / °C

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"/>	<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 <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<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 <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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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) and

4/22/19  
Date/Time Reviewed

Origins Laboratory, Inc.

*Jefe Pellegrini*

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: Top-Rider #1

## MW-01R2

4/19/2019 9:30:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc.

Y904353-01 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B9D1908	KDK	04/19/2019	04/20/2019	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	110 %	84-121	"	"	"
Surrogate: Toluene-d8	109 %	85-115	"	"	"
Surrogate: 4-Bromofluorobenzene	103 %	84-114	"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: Top-Rider #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 B9D1908 - EPA 5030B (Water)**

**Blank (B9D1908-BLK1)**

Prepared: 04/19/2019 Analyzed: 04/19/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5	105		84-121			
Surrogate: Toluene-d8	68		"	62.5	109		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: Top-Rider #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 B9D1908 - EPA 5030B (Water)**

**LCS (B9D1908-BS1)**

Prepared: 04/19/2019 Analyzed: 04/19/2019

Benzene	44.5	1.00	ug/L	50.0		89.0	73.3-129
Toluene	54.6	1.00	"	50.0		109	76.2-123
Ethylbenzene	54.2	1.00	"	50.0		108	73.6-130
m,p-Xylene	110	2.00	"	100		110	76.1-126
o-Xylene	52.7	1.00	"	50.0		105	76.6-124
Surrogate: 1,2-Dichloroethane-d4	60		"	62.5		95.9	84-121
Surrogate: Toluene-d8	67		"	62.5		108	85-115
Surrogate: 4-Bromofluorobenzene	62		"	62.5		98.9	84-114

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.  
4101 Inca Street  
Denver CO 80211

Dan Coloccia  
Project Number: [none]  
Project: Top-Rider #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 B9D1908 - EPA 5030B (Water)**

Matrix Spike (B9D1908-MS1)		Source: Y904333-01			Prepared: 04/19/2019 Analyzed: 04/19/2019					
Benzene	44.5	1.00	ug/L	50.0	ND	89.0	74-130			
Toluene	56.5	1.00	"	50.0	ND	113	73-131			
Ethylbenzene	57.8	1.00	"	50.0	0.350	115	76-132			
m,p-Xylene	116	2.00	"	100	ND	116	69-139			
o-Xylene	56.3	1.00	"	50.0	ND	113	74-131			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.2	84-121			
Surrogate: Toluene-d8	68		"	62.5		109	85-115			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		100	84-114			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: Top-Rider #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 B9D1908 - EPA 5030B (Water)**

Matrix Spike Dup (B9D1908-MSD1)		Source: Y904333-01			Prepared: 04/19/2019 Analyzed: 04/19/2019					
Benzene	44.0	1.00	ug/L	50.0	ND	88.1	74-130	1.06	20	
Toluene	55.9	1.00	"	50.0	ND	112	73-131	1.10	20	
Ethylbenzene	58.1	1.00	"	50.0	0.350	116	76-132	0.673	20	
m,p-Xylene	117	2.00	"	100	ND	117	69-139	0.549	20	
o-Xylene	56.5	1.00	"	50.0	ND	113	74-131	0.301	20	
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		98.3	84-121			
Surrogate: Toluene-d8	69		"	62.5		110	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Dan Coloccia

Project Number: [none]

Project: Top-Rider #1

### 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.

Origins Laboratory, Inc.



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