



September 26, 2019

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

**Closure Report
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 Closure Report 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 limit. 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 1st quarter 2019.

On June 27, 2019, Top Operating Company submitted a Site Investigation and Remediation Workplan (Supplemental) – Form 27 (COGCC Document No. 402088871) presenting groundwater data collected during the 2nd 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 3rd quarter 2019 groundwater sampling event on July 31, 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 9.03 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 8260D. 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 July 31, 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 discontinuing quarterly groundwater sampling, abandoning monitoring well MW-01R2 per the Division of Water Resources guidelines, and request final closure for the site.

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 and title.

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

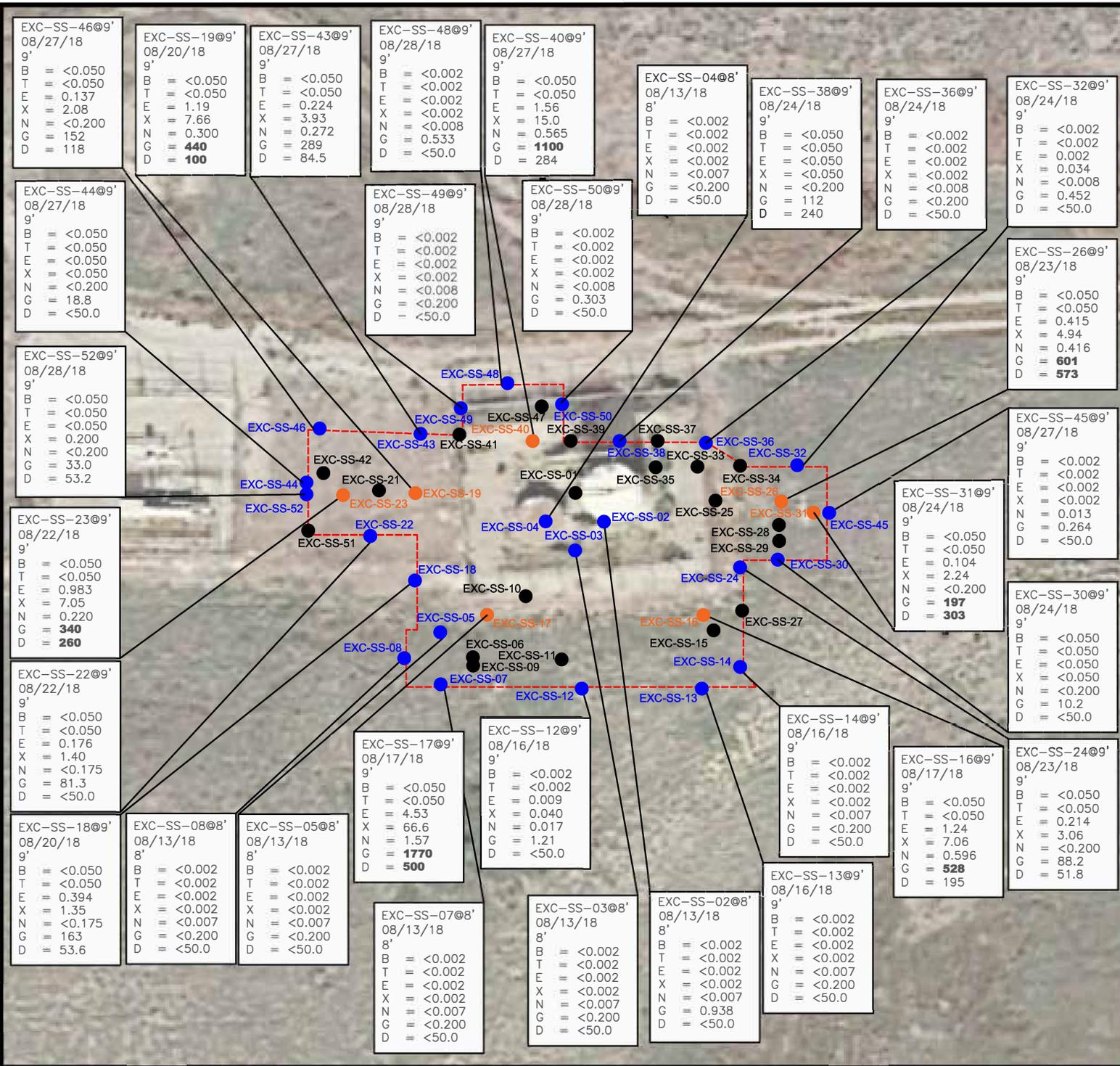


Source: USGS 7.5 Minute Topographic Map, Longmont, CO Quadrangle 2016

Figure 1



EAGLE
ENVIRONMENTAL
CONSULTING, INC.



LEGEND

- - - APPROXIMATE EXCAVATION BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES ABOVE COGCC TABLE 910-1 - IMPACTS REMOVED
- APPROXIMATE LOCATION OF SOIL SAMPLES BELOW COGCC TABLE 910-1
- 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

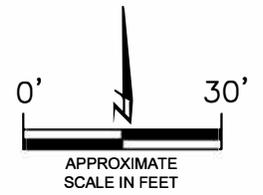
TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS

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 ENVIRONMENTAL CONSULTING, INC.

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

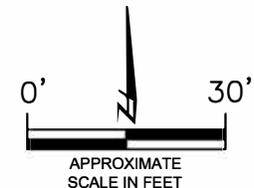
LEGEND

- - - 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
 REMEDIATION # 11300

DATE:
10/10/18
 DRAWN BY:
or
 FIG.
NO. 3

EAGLE
 ENVIRONMENTAL
 CONSULTING, INC.
 4101 INCA STREET, DENVER, CO 80211
 Ph: 303-433-0479 - F: 303-325-5449



MW-01R2
 07/31/19
 B = <1.00
 T = <1.00
 E = <1.00
 X = <1.00

MW-01R2

LEGEND

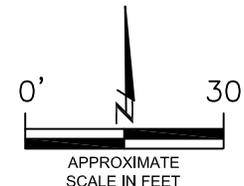
- - - APPROXIMATE EXCAVATION BOUNDARIES
- APPROXIMATE REPLACEMENT MONITORING WELL LOCATION

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
 REMEDIATION # 11300

DATE:	08/05/19
DRAWN BY:	or
FIG. NO.	4

EAGLE
 ENVIRONMENTAL
 CONSULTING, INC.
 4101 INCA STREET, DENVER, CO 80211
 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
REMEDIATION #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
COGCC - Regulatory Limits (Table 910-1) (mg/kg)			0.17	85	100	175	23	500			<4	6 to 9	<12
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	425	95.0	<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	877	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
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



TABLE 1
SOIL ANALYTICAL RESULTS SUMMARY
RIDER #1
HISTORICAL RELEASE
40.178822 / -105.058512
NE¼ SE¼ SEC.36 T3N R69W 6PM
BOULDER COUNTY, COLORADO
REMEDIATION #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
COGCC - Regulatory Limits (Table 910-1) (mg/kg)			0.17	85	100	175	23	500			<4	6 to 9	<12
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	847	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
EXC-SS-02 @ 8' (40.178817 / -105.058472)	08/13/18	8	<0.002	<0.002	<0.002	<0.002	<0.007	0.938	<50.0	NA	NA	NA	NA
EXC-SS-03 @ 8' (40.178802 / -105.058495)	08/13/18	8	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-04 @ 8' (40.178814 / -105.058520)	08/13/18	8	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-05 @ 8' (40.178751 / -105.058589)	08/13/18	8	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-07 @ 8' (40.178723 / -105.058611)	08/13/18	8	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-08 @ 8' (40.178726 / -105.058638)	08/13/18	8	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-12 @ 9' (40.178706 / -105.058474)	08/16/18	9	<0.002	<0.002	0.009	0.040	0.017	1.21	<50.0	NA	NA	NA	NA
EXC-SS-13 @ 9' (40.178705 / -105.058393)	08/16/18	9	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-14 @ 9' (40.178742 / -105.058370)	08/16/18	9	<0.002	<0.002	<0.002	<0.002	<0.007	<0.200	<50.0	NA	NA	NA	NA



TABLE 1
SOIL ANALYTICAL RESULTS SUMMARY
RIDER #1
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40.178822 / -105.058512
NE¼ SE¼ SEC.36 T3N R69W 6PM
BOULDER COUNTY, COLORADO
REMEDIATION #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
COGCC - Regulatory Limits (Table 910-1) (mg/kg)			0.17	85	100	175	23	500			<4	6 to 9	<12
EXC-SS-16 @ 9' (40.178785 / -105.058545)	08/17/18	9	<0.050	<0.050	1.24	7.06	0.596	528	195	NA	NA	NA	NA
EXC-SS-17 @ 9' (40.178766 / -105.058563)	08/17/18	9	<0.050	<0.050	4.53	66.6	1.57	1770	500	NA	NA	NA	NA
EXC-SS-18 @ 9' (40.178784 / -105.058619)	08/20/18	9	<0.050	<0.050	0.394	1.35	<0.175	163	53.6	NA	NA	NA	NA
EXC-SS-19 @ 9' (40.178829 / -105.058598)	08/20/18	9	<0.050	<0.050	1.19	7.66	0.300	440	100	NA	NA	NA	NA
EXC-SS-22 @ 9' (40.178807 / -105.058647)	08/22/18	9	<0.050	<0.050	0.176	1.40	<0.175	81.3	<50.0	NA	NA	NA	NA
EXC-SS-23 @ 9' (40.178833 / -105.058658)	08/22/18	9	<0.050	<0.050	0.983	7.05	0.220	340	260	NA	NA	NA	NA
EXC-SS-24 @ 9' (40.178795 / -105.058373)	08/23/18	9	<0.050	<0.050	0.214	3.06	<0.200	88.2	51.8	NA	NA	NA	NA
EXC-SS-26 @ 9' (40.178830 / -105.058357)	08/23/18	9	<0.050	<0.050	0.415	4.94	0.416	601	573	NA	NA	NA	NA
EXC-SS-30 @ 9' (40.178781 / -105.058331)	08/24/18	9	<0.050	<0.050	<0.050	<0.050	<0.200	10.2	<50.0	NA	NA	NA	NA
EXC-SS-31 @ 9' (40.178825 / -105.058312)	08/24/18	9	<0.050	<0.050	0.104	2.24	<0.200	197	303	NA	NA	NA	NA
EXC-SS-32 @ 9' (40.178864 / -105.058327)	08/24/18	9	<0.002	<0.002	0.002	0.034	<0.008	0.452	<50.0	NA	NA	NA	NA
EXC-SS-36 @ 9' (40.178950 / -105.058383)	08/24/18	9	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-38 @ 9' (40.178910 / -105.058452)	08/24/18	9	<0.050	<0.050	<0.050	<0.050	<0.200	112	240	NA	NA	NA	NA
EXC-SS-40 @ 9' (40.178908 / -105.058449)	08/27/28	9	<0.050	<0.050	1.56	15.0	0.565	1100	284	NA	NA	NA	NA
EXC-SS-43 @ 9' (40.178904 / -105.058528)	08/27/28	9	<0.050	<0.050	0.224	3.93	0.272	289	84.5	NA	NA	NA	NA
EXC-SS-44 @ 9' (40.178876 / -105.058670)	08/27/28	9	<0.050	<0.050	<0.050	<0.050	<0.200	18.8	<50.0	NA	NA	NA	NA
EXC-SS-45 @ 9' (40.178823 / -105.058297)	08/27/28	9	<0.002	<0.002	<0.002	<0.002	0.013	0.264	<50.0	NA	NA	NA	NA



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
COGCC - Regulatory Limits (Table 910-1) (mg/kg)			0.17	85	100	175	23	500			<4	6 to 9	<12
EXC-SS-46 @ 9' (40.178905 / -105.058636)	08/27/28	9	<0.050	<0.050	0.137	2.08	<0.200	152	118	NA	NA	NA	NA
EXC-SS-48 @ 9' (40.178937 / -105.058502)	08/28/18	9	<0.002	<0.002	<0.002	<0.002	<0.008	0.533	<50.0	NA	NA	NA	NA
EXC-SS-49 @ 9' (40.178921 / -105.058556)	08/28/18	9	<0.002	<0.002	<0.002	<0.002	<0.008	<0.200	<50.0	NA	NA	NA	NA
EXC-SS-50 @ 9' (40.178919 / -105.058461)	08/28/18	9	<0.002	<0.002	<0.002	<0.002	<0.008	0.303	<50.0	NA	NA	NA	NA
EXC-SS-52 @ 9' (40.178860 / -105.058677)	08/28/18	9	<0.050	<0.050	<0.050	0.200	<0.200	33.0	53.2	NA	NA	NA	NA
MW-01R2 @ 7.5-10' (40.178764 / -105.058722)	10/02/18	7.5-10	<0.002	<0.002	<0.002	<0.002	<0.008	0.352	<50.0	NA	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 **bold** 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
BOULDER COUNTY, COLORADO
REMEDATION #11300

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
COGCC Table 910-1 Regulatory Limits (µg/L)		5	560	700	1400
MW-01R (40.178764 / -105.058722)	05/17/18	<4.00	<4.00	27.4	180
<i>DESTROYED</i>					
MW-01R2 (40.178764 / -105.058722)	10/03/18	<1.00	<1.00	<1.00	<1.00
	01/14/19	<4.00	<4.00	<4.00	<4.00
	04/19/19	<1.00	<1.00	<1.00	<1.00
	07/31/19	<1.00	<1.00	<1.00	<1.00
EXC-GW-01 (40.178816 / -105.058488)	08/13/18	<4.00	<4.00	760	9420
EXC-GW-02 (40.178741 / -105.058586)	08/13/18	<4.00	<4.00	66.4	370
EXC-GW-03 (40.178473 / -105.058411)	08/16/18	<4.00	<4.00	430	6330
EXC-GW-04 (40.178817 / -105.058338)	08/24/18	<4.00	<4.00	85.4	1400
EXC-GW-05 (40.178836 / -105.058509)	08/28/18	<4.00	<4.00	26.1	428

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.

Values presented in **bold** indicate concentrations exceeded COGCC Table 910-1 regulatory limits.



ATTACHMENT A

Laboratory Analytical Report



August 05, 2019

Eagle Environmental Consulting, Inc.

Dan Coloccia

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Top-Rider #1

Project Number - [none]

Attached are your analytical results for Top-Rider #1 received by Origins Laboratory, Inc. July 31, 2019. This project is associated with Origins project number Y907496-01.

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.
8000 W 44th Ave
Wheat Ridge CO 80033

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

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01R2	Y907496-01	Water	July 31, 2019 10:55	07/31/2019 14:30

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.

Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

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: 1907496

Client: Eagle
 Client Project ID: TOP Rider #1

Checklist Completed by: JG

Shipped Via: HD
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)
 Airbill #: N/A

Date/time completed: 7/31/2019

Matrix(s) Received: (Check all that apply): Soil/Solid Water Other: _____ (Describe)

Cooler Number/Temperature: 1 / 2.3 °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 ^{(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 HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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) [Signature]

Date/Time/Reviewed 8/1/19

Origins Laboratory, Inc.

Jefe Pellegrini

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.

Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

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

MW-01R2

7/31/2019 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
---------	--------	-----------------	-------	----------	-------	---------	----------	----------	-------

Origins Laboratory, Inc.
Y907496-01 (Water)

BTEX by EPA 8260D

Benzene	ND	1.00	ug/L	1	B9H0114	KDK	08/01/2019	08/02/2019	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	101 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.8 %	70-130			"	"	"	"	

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

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

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 B9H0114 - EPA 5030B (Water)

Blank (B9H0114-BLK1)

Prepared: 08/01/2019 Analyzed: 08/01/2019

Benzene	ND	1.00	ug/L							U
Toluene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	63		"	62.5		101	70-130			
<i>Surrogate: Toluene-d8</i>	62		"	62.5		99.3	70-130			
<i>Surrogate: 4-Bromofluorobenzene</i>	61		"	62.5		98.4	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

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

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B9H0114 - EPA 5030B (Water)

LCS (B9H0114-BS1)

Prepared: 08/01/2019 Analyzed: 08/01/2019

Benzene	57.3	1.00	ug/L	50.0		115	70-130			
Toluene	57.5	1.00	"	50.0		115	70-130			
Ethylbenzene	59.8	1.00	"	50.0		120	70-130			
m,p-Xylene	119	2.00	"	100		119	70-130			
o-Xylene	58.8	1.00	"	50.0		118	70-130			
Surrogate: 1,2-Dichloroethane-d4	61		"	62.5		97.9	70-130			
Surrogate: Toluene-d8	64		"	62.5		102	70-130			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

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

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B9H0114 - EPA 5030B (Water)

Matrix Spike (B9H0114-MS1)	Source: Y907481-01			Prepared: 08/01/2019 Analyzed: 08/01/2019						
Benzene	57.4	1.00	ug/L	50.0	0.660	114	70-130			
Toluene	57.2	1.00	"	50.0	ND	114	70-130			
Ethylbenzene	58.5	1.00	"	50.0	0.250	117	70-130			
m,p-Xylene	117	2.00	"	100	0.490	117	70-130			
o-Xylene	56.5	1.00	"	50.0	ND	113	70-130			
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		99.3	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
 8000 W 44th Ave
 Wheat Ridge CO 80033

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

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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B9H0114 - EPA 5030B (Water)

Matrix Spike Dup (B9H0114-MSD1)	Source: Y907481-01			Prepared: 08/01/2019 Analyzed: 08/01/2019						
Benzene	57.3	1.00	ug/L	50.0	0.660	113	70-130	0.157	20	
Toluene	57.2	1.00	"	50.0	ND	114	70-130	0.0700	20	
Ethylbenzene	59.1	1.00	"	50.0	0.250	118	70-130	0.986	20	
m,p-Xylene	117	2.00	"	100	0.490	116	70-130	0.188	20	
o-Xylene	56.6	1.00	"	50.0	ND	113	70-130	0.106	20	
Surrogate: 1,2-Dichloroethane-d4	62		"	62.5		98.5	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.
8000 W 44th Ave
Wheat Ridge CO 80033

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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Jen Pellegrini For Noelle Doyle Mathis, President