



October 15, 2018

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

**Monitoring Well Replacement and Groundwater Monitoring 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 Monitoring Well Replacement and Groundwater Monitoring 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 (Rider #1) 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) (Report) and the COGCC NOAV (COGCC Document No. 401562368). Terracon's report indicated 11 soil borings were installed at the site in September and October, 2017. Based on analytical results of soil samples collected by Terracon, 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 total petroleum hydrocarbons (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 9-9.5 feet bgs. EAGLE collected grab groundwater samples (EXC-GW-01 and EXC-GW-02) on August 13, 2018, placed the samples in an iced cooler, and delivered to Origins, under standard COC protocol, for analysis of BTEX following modified EPA Method 8260c. The groundwater samples were received within the required holding time for the laboratory analysis. On August 16, 2018, EAGLE collected grab groundwater sample EXC-GW-03 for laboratory analysis.

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 grab 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.

## **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 feet bgs to 15 feet bgs. Groundwater was observed at a depth of approximately 9-9.5 feet bgs during initial assessment and excavation activities. Groundwater was observed at approximately 9 feet bgs during groundwater sampling activities. A detailed description of the subsurface lithology is presented in the soil boring log included in Attachment A.

## **2.0 SOIL BORING ADVANCEMENT/MONITORING WELL INSTALLATION ACTIVITIES**

Per the current approved Site Investigation and Remediation Workplan (Form 27, document # 401748617), EAGLE proposed the installation of replacement monitoring well MW-01R to continue monitoring groundwater concentrations at the site. Following Form 27 approval, EAGLE scheduled soil boring advancement and monitoring well installation activities.

### **2.1 Field Work Preparation and Planning**

The Utility Notification Center of Colorado (UNCC) was called at least 48 hours in advance of drilling activities to confirm that no unmarked utilities or other obstacles were present within the proposed drilling locations. Tier II facility owners were also contacted to confirm the necessary buried utility notifications were completed.

### **2.2 Soil Boring Advancement/Monitoring Well Completion Activities**

On October 2, 2018, one (1) 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.

The location was logged in the field according to soil description, soil classification, moisture content, staining, and volatile organic compound (VOC) field screenings. The monitoring well, MW-01R2, was

completed with 2-inch, schedule 40, poly vinyl chloride (PVC) pipe each to a total depth of approximately 15 feet bgs. Ten feet of 0.010 slot, 2-inch, PVC screen was placed at the bottom of the boring followed by 5-feet of PVC riser. The well annulus of each monitoring well was backfilled with 10/20 silica sand to approximately 4 feet bgs, followed by a hydrated bentonite seal to the surface. Monitoring well MW-01R2 was completed as an approximately 2.5-foot PVC stickup with a steel casing. Following installation activities, the monitoring well was developed through purging the location a minimum of six well volumes using a disposable PVC bailer.

EAGLE recorded the spatial location of replacement monitoring well MW-01R2 using a Trimble GeoXT 6000 series instrument. The soil boring log/monitoring well completion diagram is included in Attachment A. The replacement monitoring well location is presented in Figure 2.

## **2.3 Soil Sampling Procedures**

During soil boring advancement/monitoring well installation activities, soil samples were collected continuously within 5-foot, plastic sample liners. The samples within the plastic liners were separated in 2.5-foot intervals for soil identification and analysis. A portion from each 2.5-foot interval was placed in a sealable plastic bag for VOC headspace analysis utilizing a field calibrated photoionization detector (PID). Another portion of the soil sample was placed in a 2-ounce glass jar and packed in an iced cooler.

Based on PID readings, one soil sample with the highest organic vapor measurement (OVM) from the boring (MW-01R2@7.5-10') was submitted to Origins, following standard chain of custody procedures, for laboratory analysis. Each soil sample was analyzed for benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, total petroleum hydrocarbons – gasoline range organics (TPH-GRO), and total petroleum hydrocarbons – diesel range organics (TPH-DRO), following modified EPA Methods 8260c and 8015. The laboratory received the soil samples within the required holding time for each laboratory analysis.

## **2.4 Groundwater Sampling Procedures**

EAGLE returned to the site on October 3, 2018 sample 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 feet. 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. The samples were transported in an iced cooler under standard chain-of-custody procedures to Origins and were received within the required holding time.

## **2.5 Laboratory Analytical Results**

### ***2.5.1 Soil Analytical Results***

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 total petroleum hydrocarbons (TPH) exceeding applicable COGCC Table 910-1 regulatory limits. Monitoring well soil analytical results are summarized in Table 1 and included in Figure 2. The soil sample laboratory analytical report is included in Attachment B.

### **2.5.2 Groundwater Analytical Results**

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.

Groundwater analytical results are summarized in Table 2 and presented in Figure 3. The groundwater laboratory analytical report is included in Attachment B.

### **3.0 CONCLUSIONS**

Based on the information presented in this report, EAGLE concludes the following:

- On October 2, 2018, EAGLE advanced one (1) soil boring (replacement monitoring well MW-01R2) onsite.
- The soil sample collected from monitoring well MW-01R2 on October 2, 2018 did not contain concentrations of BTEX, naphthalene, or TPH exceeding applicable COGCC Table 910-1 regulatory limits.
- 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.

### **4.0 RECOMMENDATIONS**

Based on the information presented in this report, EAGLE recommends the following:

- Continue quarterly groundwater sampling activities on monitoring well MW-01R2.

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.**



Andrew Newberry  
Project Geologist



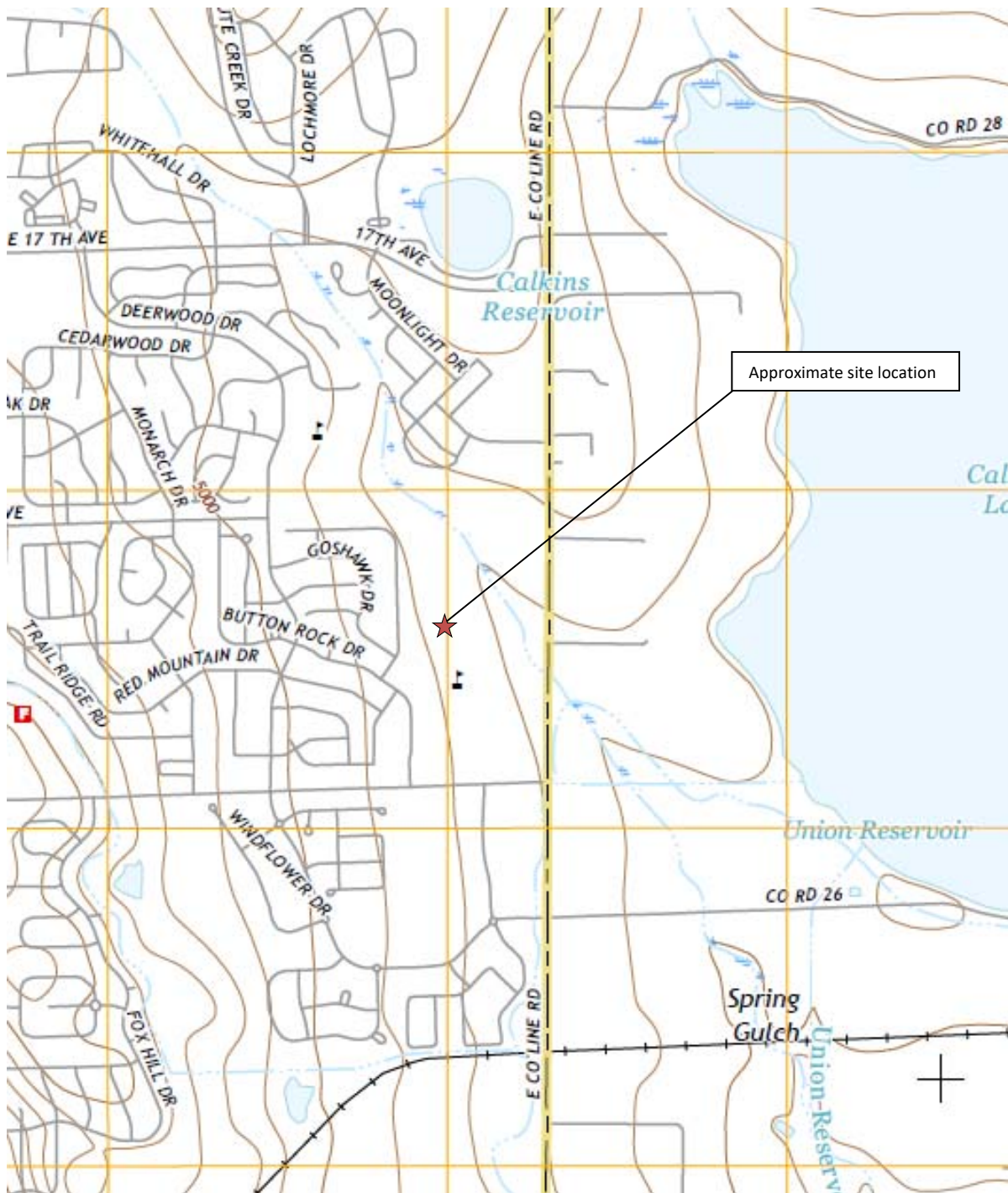
Daniel Coloccia  
Project Scientist

## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Monitoring Well Soil Analytical Map**

**Figure 3: 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 REPLACEMENT MONITORING WELL LOCATION

## PARAMETERS

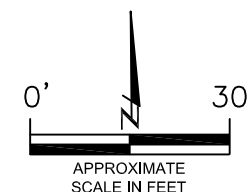
SOIL SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
N = NAPHTHALENE (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)

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

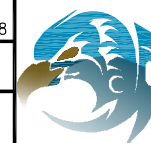


MONITORING WELL SOIL ANALYTICAL MAP  
RIDER #1  
HISTORICAL RELEASE  
40.178822 / -105.058512  
NE1/4 SE1/4 SEC.36 T3N R69W 6PM  
BOULDER COUNTY, COLORADO  
REMEDATION # 11300

DATE:  
10/10/18

DRAWN BY:  
or

FIG.  
NO. 2



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





# LEGEND

--- APPROXIMATE EXCAVATION BOUNDARIES



APPROXIMATE REPLACEMENT MONITORING WELL LOCATION

## PARAMETERS

SAMPLE LOCATION

DATE

B = BENZENE ( $\mu\text{g/L}$ )

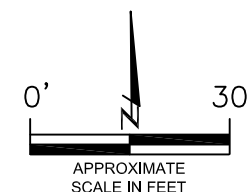
T = TOLUENE ( $\mu\text{g/L}$ )

E = ETHYLBENZENE ( $\mu\text{g/L}$ )

X = TOTAL XYLENES ( $\mu\text{g/L}$ )

$\mu\text{g/L}$  = MICROGRAMS PER LITER

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



APPROXIMATE  
SCALE IN FEET

GROUNDWATER ANALYTICAL MAP  
RIDER #1

HISTORICAL RELEASE

40.178822 / -105.058512

NE1/4 SE1/4 SEC.36 T3N R69W 6PM

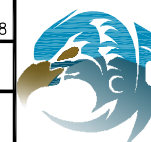
BOULDER COUNTY, COLORADO

REMEDIAL ACTION # 11300

DATE:  
10/10/18

DRAWN BY:  
or

FIG.  
NO. 4



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## **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
<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	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
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

**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-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
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
EXC-SS-16 @ 9' (40.178785 / -105.058545)	08/17/18	9	<0.050	<0.050	1.24	7.06	0.596	<b>528</b>	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	<b>1770</b>	<b>500</b>	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
<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>
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
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

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>
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 <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  
BOULDER 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-01R (40.178764 / -105.058722)	05/17/18	<4.00	<4.00	27.4	180
EXC-GW-01 (40.178816 / -105.058488)	08/13/18	<4.00	<4.00	<b>760</b>	<b>9420</b>
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	<b>6330</b>
EXC-GW-04 (40.178817 / -105.058338)	08/24/18	<4.00	<4.00	85.4	<b>1400</b>
EXC-GW-05 (40.178836 / -105.058509)	08/28/18	<4.00	<4.00	26.1	428
MW-01R2 (40.178764 / -105.058722)	10/03/18	<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. Values presented in <b>bold</b> indicate concentrations exceeded COGCC Table 910-1 regulatory limits.					

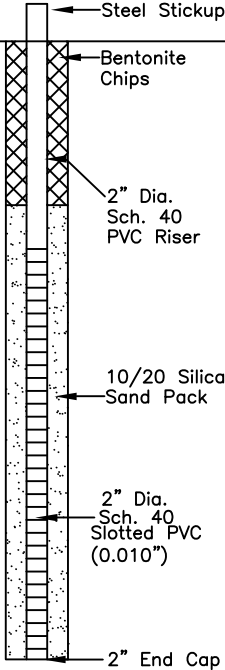
## **ATTACHMENT A**

### **Soil Boring Log / Monitoring Well Completion Diagram**



# Boring Log/Well Completion Diagram: MW-01R2

PAGE 1 OF 1

DEPTH (FT)	LITHOLOGY	SAMPLE				OVM/OVA (PPM)	BLOW COUNT (per 0.5 FT)	DEPTH (FT)	WELL CONSTRUCTION DETAIL	COMMENTS		
	DESCRIPTION	GRAPHIC LOG	TYPE	NUMBER	RECOVERY %							
0	(0-9.5') sandy CLAY - light brown, dry-wet, medium stiff, low plasticity, well graded with 15% sand slight gray/black staining + odor @ 9-9.5'	CL	DP	1	75	0.3	N/A	5				
						1.4						
5			DP	2	75	4.3	N/A					
	wet @ ~9'					169.8						
10	(9.5-15') gravelly SAND - light brown, wet, medium dense, fine to coarse grained, well graded with 10% gravel black HC staining + odor @ 9.5-10'	SW	DP	3	60	24.3	N/A	10		2" Dia. Sch. 40 Slotted PVC (0.010")		
						2.6						
15	BoB @ 15'									15		2" End Cap
20								20				
25								25				
30												

DP - Direct Push  
HC - Hydrocarbon  
BoB - Bottom of Boring  
N/O - no odor  
N/S - no staining  
TOC - top of casing  
bgs - below ground surface

DP - Direct Push  
HC - Hydrocarbon  
BoB - Bottom of Boring  
N/O - no odor  
N/S - no staining  
TOC - top of casing  
bgs - below ground surface

START/COMPLETION DATE 10/2/2018

SAND PACK INTERVAL (FEET): 4-15

PROJECT: RIDER #1

BENTONITE/GROUT INTERVAL (FEET): 1-4

LOGGED BY: A. ROMANSKY

WELL SCREEN INTERVAL (FEET): 5-15

DRILLING COMPANY/EQUIPMENT: EAGLE/GEOPROBE

WELL DIAMETER (INCHES): 2

BORING DEPTH (FEET): 15

WELL DEPTH (FEET): 15

PID INSTRUMENT: MiniRAE 3000 - PID #6

TIME STARTED/COMPLETED: 1305/1400

SAMPLE COLLECTION DEPTH (FEET)/TIME: 7.5-10/1325



**EAGLE**  
ENVIRONMENTAL  
CONSULTING, INC.

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

## **ATTACHMENT B**

### **Laboratory Analytical Reports**



October 05, 2018

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Rider #1**

**Project Number - [none]**

Attached are your analytical results for Rider #1 received by Origins Laboratory, Inc. October 03, 2018. This project is associated with Origins project number Y810055-01.

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

Martin C Eckert III

Project Number: [none]

Project: Rider #1

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01R2@7.5-10'	Y810055-01	Soil	October 2, 2018 13:25	10/03/2018 12:15

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

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

Martin C Eckert III  
Project Number: [none]  
Project: Rider #1

www.originslaboratory.com

**ORIGINS**  
LABORATORY, INC

page 1 of 1

7810055

Client: EAGLE ENV CONSULTING  
Address: 4101 INCA ST  
DENVER CO  
Telephone Number: 303 433 0179  
Email Address: MCE3@eagle-enviro.com

Project Manager: MARTIN ECKERT  
Project Name: RIDER #1  
Project Number:         
Samples Collected By: AE

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 Canister #		
MW-0122075-01	10/2/18	1325	2	X					X		DR2 GOREX NAPHTHALENE	1
												2
												3
												4
												5
												6
												7
												8
												9
												10

Relinquished By: <u>[Signature]</u>	Date: <u>10/3/18</u>	Time: <u>1215</u>	Received By: <u>[Signature]</u>	Date: <u>10/3/18</u>	Time: <u>1215</u>
Relinquished By: <u>[Signature]</u>	Date: <u>      </u>	Time: <u>      </u>	Received By: <u>[Signature]</u>	Date: <u>      </u>	Time: <u>      </u>

Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard

Date Results Needed

Temp Received- 8.9

REPORT TO: ALEX ANDREIN, 20823, MARTIN

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Rider #1

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: Y310055

Client: Eagle Env.

Client Project ID: Rider #1

Checklist Completed by: Don Lee

Shipped Via: HD

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

Date/time completed: 10-3-18

Airbill #: NA

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

Cooler Number/Temperature: ✓ 15.8 °C ✓ \_\_\_\_\_ °C ✓ \_\_\_\_\_ °C ✓ \_\_\_\_\_ °C (Describe)

Thermometer ID: 7003

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? If yes, contact client and note in narrative.			<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) JP

Date/Time Reviewed 10/4/18

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Rider #1

MW-01R2@7.5-10'  
10/2/2018 1:25:00PM

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

Origins Laboratory, Inc.  
Y810055-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B8J0304	JTD	10/03/2018	10/03/2018	U
------------------	----	------	-------	---	---------	-----	------------	------------	---

Surrogate: o-Terphenyl	70.6 %	59-131			"	"	"	
------------------------	--------	--------	--	--	---	---	---	--

## GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	0.352	0.200	mg/kg	1	B8J0401	JTD	10/04/2018	10/04/2018	
Benzene	ND	0.002	"	"	"	JTD	"	"	U
Toluene	ND	0.002	"	"	"	JTD	"	"	U
Ethylbenzene	ND	0.002	"	"	"	JTD	"	"	U
Xylenes, total	ND	0.002	"	"	"	JTD	"	"	U
Napthalene	ND	0.008	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	99.9 %	70-130			"	"	"	
Surrogate: Toluene-d8	101 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %	70-130			"	"	"	

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: 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
<b>Batch B8J0401 - EPA 5030 (soil)</b>										
<b>Blank (B8J0401-BLK1)</b>					Prepared: 10/04/2018 Analyzed: 10/04/2018					
Gasoline Range Hydrocarbons	ND	0.200	mg/kg							U
Benzene	ND	0.002	"							U
Toluene	ND	0.002	"							U
Ethylbenzene	ND	0.002	"							U
Xylenes, total	ND	0.002	"							U
Naphthalene	ND	0.008	"							U
Surrogate: 1,2-Dichloroethane-d4	63		ug/kg	62.5		100	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: 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
<b>Batch B8J0401 - EPA 5030 (soil)</b>										
<b>LCS (B8J0401-BS1)</b>					Prepared: 10/04/2018 Analyzed: 10/04/2018					
Benzene	0.101	0.002	mg/kg	0.100		101	70-130			
Toluene	0.105	0.002	"	0.100		105	70-130			
Ethylbenzene	0.103	0.002	"	0.100		103	70-130			
m,p-Xylene	0.204	0.004	"	0.200		102	70-130			
o-Xylene	0.101	0.002	"	0.100		101	70-130			
Naphthalene	0.104	0.008	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		94.2	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.4	70-130			

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: 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
<b>Batch B8J0401 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B8J0401-MS1)</b>		<b>Source: Y810055-01</b>			Prepared: 10/04/2018 Analyzed: 10/04/2018					
Benzene	0.098	0.002	mg/kg	0.100	ND	98.1	70-130			
Toluene	0.100	0.002	"	0.100	ND	100	70-130			
Ethylbenzene	0.100	0.002	"	0.100	ND	100	70-130			
m,p-Xylene	0.201	0.004	"	0.200	ND	101	70-130			
o-Xylene	0.101	0.002	"	0.100	ND	101	70-130			
Naphthalene	0.104	0.008	"	0.100	0.005	98.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	60		ug/kg	62.5		96.7	70-130			
Surrogate: Toluene-d8	62		"	62.5		98.9	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		100	70-130			

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: 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
<b>Batch B8J0401 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B8J0401-MSD1)</b>		<b>Source: Y810055-01</b>			Prepared: 10/04/2018 Analyzed: 10/04/2018					
Benzene	0.104	0.002	mg/kg	0.100	ND	104	70-130	5.63	20	
Toluene	0.107	0.002	"	0.100	ND	107	70-130	6.07	20	
Ethylbenzene	0.108	0.002	"	0.100	ND	108	70-130	7.06	20	
m,p-Xylene	0.215	0.004	"	0.200	ND	107	70-130	6.35	20	
o-Xylene	0.106	0.002	"	0.100	ND	106	70-130	4.59	20	
Naphthalene	0.108	0.008	"	0.100	0.005	103	70-130	3.85	20	
Surrogate: 1,2-Dichloroethane-d4	59		ug/kg	62.5		93.7	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.4	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: 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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

## Extractable Petroleum Hydrocarbons by 8015C - Quality Control

### Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch B8J0304 - EPA 3550B

#### Blank (B8J0304-BLK1)

Prepared: 10/03/2018 Analyzed: 10/03/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
------------------	----	------	-------	--	--	--	--	--	--	---

Surrogate: o-Terphenyl

37

"

50.0

73.7

59-131

#### Blank (B8J0304-BLK2)

Prepared: 10/03/2018 Analyzed: 10/03/2018

Diesel (C10-C28)	ND	50.0	mg/kg							U
------------------	----	------	-------	--	--	--	--	--	--	---

Surrogate: o-Terphenyl

38

"

50.0

75.5

59-131

#### LCS (B8J0304-BS1)

Prepared: 10/03/2018 Analyzed: 10/03/2018

Diesel (C10-C28)	963	50.0	mg/kg	1000		96.3	64-121			
------------------	-----	------	-------	------	--	------	--------	--	--	--

Surrogate: o-Terphenyl

47

"

50.0

94.5

59-131

#### LCS (B8J0304-BS2)

Prepared: 10/03/2018 Analyzed: 10/03/2018

Diesel (C10-C28)	989	50.0	mg/kg	1000		98.9	64-121			
------------------	-----	------	-------	------	--	------	--------	--	--	--

Surrogate: o-Terphenyl

45

"

50.0

89.0

59-131

#### Matrix Spike (B8J0304-MS1)

Source: Y810033-03

Prepared: 10/03/2018 Analyzed: 10/03/2018

Diesel (C10-C28)	932	50.0	mg/kg	1000	ND	93.2	53-125			
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Surrogate: o-Terphenyl

40

"

50.0

80.8

59-131

#### Matrix Spike (B8J0304-MS2)

Source: Y810033-04

Prepared: 10/03/2018 Analyzed: 10/03/2018

Diesel (C10-C28)	1030	50.0	mg/kg	1000	ND	103	53-125			
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Surrogate: o-Terphenyl

43

"

50.0

85.4

59-131

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Rider #1

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B8J0304 - EPA 3550B</b>										
<b>Matrix Spike Dup (B8J0304-MSD1)</b>			<b>Source: Y810033-03</b>		Prepared: 10/03/2018 Analyzed: 10/03/2018					
Diesel (C10-C28)	1020	50.0	mg/kg	1000	ND	102	53-125	8.60	20	
Surrogate: o-Terphenyl	46		"	50.0		92.8	59-131			
<b>Matrix Spike Dup (B8J0304-MSD2)</b>			<b>Source: Y810033-04</b>		Prepared: 10/03/2018 Analyzed: 10/03/2018					
Diesel (C10-C28)	1030	50.0	mg/kg	1000	ND	103	53-125	0.463	20	
Surrogate: o-Terphenyl	47		"	50.0		93.5	59-131			

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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: 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





October 08, 2018

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

**Project Name - Rider #1**

**Project Number - [none]**

Attached are your analytical results for Rider #1 received by Origins Laboratory, Inc. October 03, 2018. This project is associated with Origins project number Y810054-01.

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

Martin C Eckert III

Project Number: [none]

Project: Rider #1

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-01R2	Y810054-01	Water	October 3, 2018 10:25	10/03/2018 11:24

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Martin C Eckert III  
Project Number: [none]  
Project: Rider #1

# ORIGINS

LABORATORY, INC

www.originslaboratory.com

page of

Client: DRBLE LAW ASSOCIATES  
Address: 4101 ISCA ST  
DANVER CO  
Telephone Number: 303 433 0479  
Email Address: nick30@legis.enrdo.com

Project Manager: MARTIN BUCKLEY  
Project Name: REFER #1  
Project Number: 1  
Samples Collected By: MB




1810054

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 <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other			
MW-01R2	10/31/18	1025	3	X					X				X BTEX	1
														2
														3
														4
														5
														6
														7
														8
														9
														10
Relinquished By: 	Date: 10/31/18	Time: 1124		Received By: 	Date: 10-31-18	Time: 1124		Turnaround Time: Same Day <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard						
Relinquished By: 	Date:	Time:		Received By:	Date:	Time:								

Refer to: Alex Andrew Rios, Maria Temp Received:

5.0

Date Results Needed

Origins Laboratory, Inc.

Jeff Pellipini

*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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Rider #1

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 431054

Client: Eagle Env

Client Project ID: Rider #1

Checklist Completed by: Don Lee

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

Date/time completed: 10-3-12

Airbill #: PA

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

Cooler Number/Temperature: 1510 °C 1 °C 1 °C 1 °C

Thermometer ID: 1003

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 type="checkbox"/>	<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) MD

Date/Time Reviewed 10/14/12

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.  
4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: Rider #1

## MW-01R2

10/3/2018 10:25:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y810054-01 (Water)

### BTEX by EPA 8260C

Benzene	ND	1.00	ug/L	1	B8J0306	JTD	10/03/2018	10/04/2018	U
Toluene	ND	1.00	"	"	"	JTD	"	10/04/2018	U
Ethylbenzene	ND	1.00	"	"	"	JTD	"	"	U
Xylenes, total	ND	1.00	"	"	"	JTD	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	84-121			"	"	10/04/2018
Surrogate: Toluene-d8	99.6 %	85-115			"	"	"
Surrogate: 4-Bromofluorobenzene	107 %	84-114			"	"	"

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: 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 B8J0306 - EPA 5030B (Water)**

**Blank (B8J0306-BLK1)**

Prepared: 10/03/2018 Analyzed: 10/03/2018

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	68		"	62.5	109		84-121			
Surrogate: Toluene-d8	59		"	62.5	95.1		85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5	103		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

Martin C Eckert III

Project Number: [none]

Project: 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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B8J0306 - EPA 5030B (Water)**

**LCS (B8J0306-BS1)**

Prepared: 10/03/2018 Analyzed: 10/03/2018

Benzene	55.6	1.00	ug/L	50.0	111	73.3-129
Toluene	53.3	1.00	"	50.0	107	76.2-123
Ethylbenzene	53.7	1.00	"	50.0	107	73.6-130
m,p-Xylene	108	2.00	"	100	108	76.1-126
o-Xylene	51.8	1.00	"	50.0	104	76.6-124
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5	106	84-121
Surrogate: Toluene-d8	61		"	62.5	97.3	85-115
Surrogate: 4-Bromofluorobenzene	65		"	62.5	103	84-114

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Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: 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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B8J0306 - EPA 5030B (Water)**

Matrix Spike (B8J0306-MS1)		Source: Y810006-02			Prepared: 10/03/2018 Analyzed: 10/03/2018					
Benzene	55.3	1.00	ug/L	50.0	2.53	106	74-130			
Toluene	50.7	1.00	"	50.0	ND	101	73-131			
Ethylbenzene	51.2	1.00	"	50.0	ND	102	76-132			
m,p-Xylene	103	2.00	"	100	ND	103	69-139			
o-Xylene	49.6	1.00	"	50.0	ND	99.2	74-131			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.1	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		103	84-114			

Origins Laboratory, Inc.



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4101 Inca Street  
Denver CO 80211

Martin C Eckert III  
Project Number: [none]  
Project: 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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B8J0306 - EPA 5030B (Water)**

Matrix Spike Dup (B8J0306-MSD1)		Source: Y810006-02			Prepared: 10/03/2018 Analyzed: 10/03/2018					
Benzene	53.2	1.00	ug/L	50.0	2.53	101	74-130	3.78	20	
Toluene	48.6	1.00	"	50.0	ND	97.2	73-131	4.19	20	
Ethylbenzene	49.2	1.00	"	50.0	ND	98.5	76-132	3.81	20	
m,p-Xylene	97.8	2.00	"	100	ND	97.8	69-139	5.20	20	
o-Xylene	48.1	1.00	"	50.0	ND	96.2	74-131	3.11	20	
Surrogate: 1,2-Dichloroethane-d4	65		"	62.5		104	84-121			
Surrogate: Toluene-d8	60		"	62.5		96.3	85-115			
Surrogate: 4-Bromofluorobenzene	65		"	62.5		104	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

Martin C Eckert III

Project Number: [none]

Project: 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