



**EAGLE**  
ENVIRONMENTAL  
CONSULTING, INC.

8000 West 44<sup>th</sup> Ave., Wheat Ridge, CO 80033 • Phone: 303-433-0479 • Fax: 303-325-5449 • [www.eagle-enviro.com](http://www.eagle-enviro.com)

December 3, 2019

Mr. Jacob Evans  
Noble Energy, Inc.  
2115 117<sup>th</sup> Avenue  
Greeley, Colorado 80631

**UPRC #25-11I7, 12I7, 13I7, 14I7**  
**Water Vault Removal**  
**40.280778 / -104.848450**  
**NW¼ SW¼ SEC.25 T4N R67W 6PM**  
**Weld County, Colorado**  
**Remediation # 13815**

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present the results from the water vault removal at the UPRC #25-11I7, 12I7, 13I7, 14I7 site (site).

On November 4, 2019, EAGLE collected soil samples following the removal of the water vaults at the site. Per Noble Standard Operating Procedures, a soil sample was collected from each sidewall and the floor for field screening. The sidewall soil samples with the highest photoionization detector (PID) reading (SS-02@3' and SS-06@3') and the floor soil samples (FS-01@6' and FS-02@6') were submitted for laboratory analysis.

Based on laboratory analytical results, the soil samples (SS-02@3', SS-06@3', FS-01@6', and FS-02@6') did not contain concentrations of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, or total petroleum hydrocarbons (TPH) exceeding applicable Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 regulatory limits. Additionally, the sidewall soil sample's (SS-02@3' and SS-06@3') specific conductance, pH, and sodium adsorption ratio (SAR) values were within COGCC Table 910-1 regulatory limits.

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

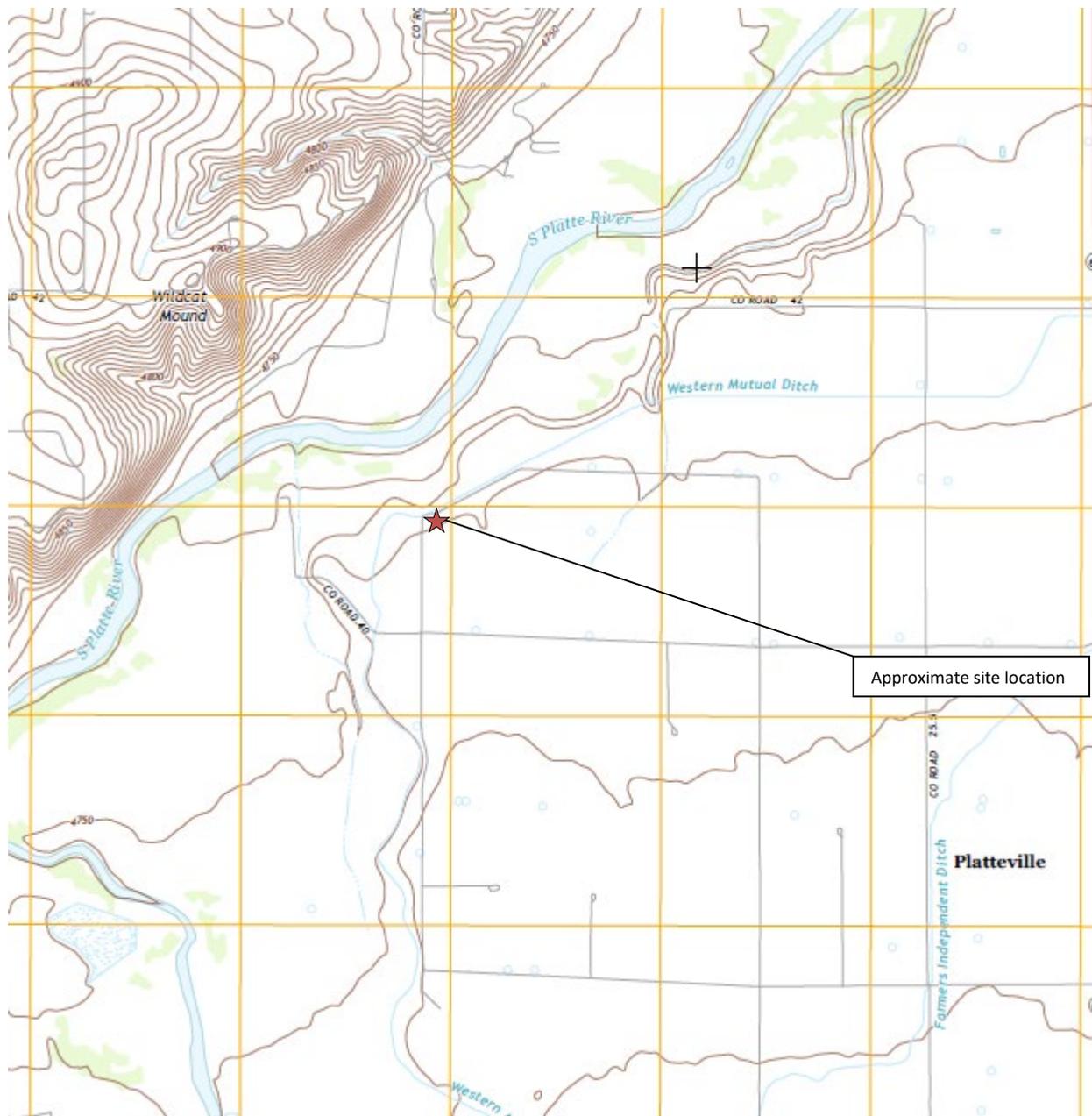


## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**



Approximate site location



**Topographic Site Location Map**  
 UPRC #25-1117, 1217, 1317, 1417  
 Water Vault Removal  
 40.280778 / -104.848450  
 NW ¼ SW ¼ Sec. 25 T4N R67W 6PM  
 Weld County, Colorado  
 Remediation # 13815



**EAGLE**  
 ENVIRONMENTAL  
 CONSULTING, INC.

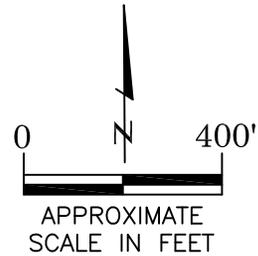
Source: USGS 7.5 Minute Topographic Map, Milliken, CO Quadrangle 2013

**Figure 1**



**LEGEND**

- UPRC #25-1117, 1217, 1317, 1417 TANK BATTERY
- UPRC #25-1117 WELL HEAD
- UPRC #25-1217 WELL HEAD
- UPRC #25-1317 WELL HEAD
- UPRC #25-1417 WELL HEAD
- APPROXIMATE LOCATIONS OF WATER VAULT REMOVAL



AERIAL SITE LOCATION MAP  
 UPRC #25-1117, 1217, 1317, 1417  
 WATER VAULT REMOVAL  
 40.280778 / -104.848450  
 NW1/4 SW1/4 SEC.25 T4N R67W 6PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 13815

DATE:  
11/20/19

FIG. NO.  
2

DRAWN BY:  
amn



EAGLE

ENVIRONMENTAL  
CONSULTING, INC.

8000 W 44th Ave, Wheat Ridge, CO 80033  
 Ph: 303-433-0479 • F: 303-325-5449



**LEGEND**

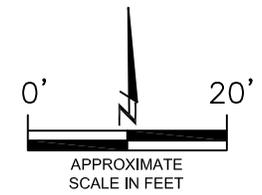
- APPROXIMATE EXCAVATION BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES FIELD ANALYZED WITH PHOTOIONIZATION DETECTOR (PID)
- APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

**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)
EC = SPECIFIC CONDUCTANCE (mmhos/cm)
SAR= SODIUM ADSORPTION RATIO
pH = pH (pH UNITS)

mg/kg = MILLIGRAMS PER KILOGRAM  
 mmhos/cm = MILLIMHOS PER CENTIMETER  
 TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS  
 TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS  
 NA = NOT ANALYZED

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



**SOIL ANALYTICAL MAP**  
 UPRC #25-1117, 1217, 1317, 1417  
 WATER VAULT REMOVAL  
 40.280778 / -104.848450  
 NW1/4 SW1/4 SEC.25 T4N R67W 6PM  
 WELD COUNTY, COLORADO  
 REMEDIATION # 13815

DATE:	11/20/19
DRAWN BY:	amn
FIG. NO.	3

**EAGLE ENVIRONMENTAL CONSULTING, INC.**  
 8000 W 44th Ave, Wheat Ridge, CO 80033  
 Ph: 303-433-0479 • F: 303-325-5449

SS-02@3'  
 11/04/19  
 3'  
 B = <0.002  
 T = <0.002  
 E = <0.002  
 X = <0.002  
 N = <0.008  
 G = <0.200  
 D = <50.0  
 EC = 0.108  
 SAR= 0.41  
 pH = 8.10

SS-06@3'  
 11/04/19  
 3'  
 B = <0.002  
 T = <0.002  
 E = <0.002  
 X = <0.002  
 N = <0.008  
 G = <0.200  
 D = <50.0  
 EC = 0.0874  
 SAR= 0.74  
 pH = 8.08

FS-01@6'  
 11/04/19  
 6'  
 B = <0.002  
 T = <0.002  
 E = <0.002  
 X = <0.002  
 N = <0.008  
 G = <0.200  
 D = <50.0  
 EC = NA  
 SAR= NA  
 pH = NA

FS-02@6'  
 11/04/19  
 6'  
 B = <0.002  
 T = <0.002  
 E = <0.002  
 X = <0.002  
 N = <0.008  
 G = <0.200  
 D = <50.0  
 EC = NA  
 SAR= NA  
 pH = NA



## **ATTACHMENT A**

### **Laboratory Analytical Report**



November 12, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

**Project Name - Noble - UPRC 25-1117, 1217, 1317, 1417**      **Project Number - N/A**

Attached are your analytical results for Noble - UPRC 25-1117, 1217, 1317, 1417 received by Origins Laboratory, Inc. November 04, 2019. This project is associated with Origins project number Y911031-01.

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

Martin C Eckert III  
Project Number: N/A  
Project: Noble - UPRC 25-1117, 1217, 1317, 1417

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-02@3'	Y911031-01	Soil	November 4, 2019 13:12	11/04/2019 14:53
FS-01@6'	Y911031-02	Soil	November 4, 2019 13:18	11/04/2019 14:53
SS-06@3'	Y911031-03	Soil	November 4, 2019 13:23	11/04/2019 14:53
FS-02@6'	Y911031-04	Soil	November 4, 2019 13:29	11/04/2019 14:53

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

Origins Laboratory

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

Sample Receipt Checklist

Origins Work Order: Y911031

Client: Eagle

Client Project ID: UPRC 25-1117, 1217, 1317

Checklist Completed by: JG

Shipped Via: HD

Date/time completed: 11/4/2019

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

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

Cooler Number/Temperature: 1 / 4.6 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe) \_\_\_\_\_ °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 type="checkbox"/>	<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 Na <sub>2</sub> CO <sub>3</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) JG

Date/Time Reviewed 11/5/19

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**SS-02@3'**

**11/4/2019 1:12:00PM**

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

**Origins Laboratory, Inc.**  
**Y911031-01 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9K0502	KDK	11/05/2019	11/05/2019	U
Surrogate: <i>o</i> -Terphenyl	78.5 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9K0501	KDK	11/05/2019	11/05/2019	U
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Naphthalene	ND	0.008	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	83.3 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	97.2 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	97.1 %	70-130			"	"	"	"	

**Metals (Saturated Paste Prep)**

Calcium	4.82		me/L	1	[none]		11/06/2019	11/11/2019	
Magnesium	2.02		"	"	"		"	"	
Sodium	0.76		"	"	"		"	"	

**pH in Soil by EPA 9045D**

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**SS-02@3'**

**11/4/2019 1:12:00PM**

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

**Origins Laboratory, Inc.**  
**Y911031-01 (Soil)**

**pH in Soil by EPA 9045D**

pH	8.10		pH Units	1	B9K0503	DJL	11/05/2019	11/05/2019	
----	------	--	----------	---	---------	-----	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	0.41			1	[none]		11/06/2019	11/11/2019	
-----	------	--	--	---	--------	--	------------	------------	--

**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.108	0.00507	mmhos/cm	1	B9K0504	DJL	11/05/2019	11/05/2019	
---------------------------	-------	---------	----------	---	---------	-----	------------	------------	--

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

FS-01@6'

11/4/2019 1:18:00PM

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

**Origins Laboratory, Inc.**  
 Y911031-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9K0502	KDK	11/05/2019	11/05/2019	U
Surrogate: <i>o</i> -Terphenyl	76.4 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9K0501	KDK	11/05/2019	11/05/2019	U
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Naphthalene	ND	0.008	"	"	"	KDK	"	"	U
Surrogate: 1,2-Dichloroethane-d4	88.9 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	92.1 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	95.4 %	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.  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**SS-06@3'**

**11/4/2019 1:23:00PM**

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

**Origins Laboratory, Inc.**  
**Y911031-03 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9K0502	KDK	11/05/2019	11/05/2019	U
Surrogate: o-Terphenyl	78.5 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9K0501	KDK	11/05/2019	11/05/2019	U
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Naphthalene	ND	0.008	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	90.8 %	70-130			"	"	"	"	
Surrogate: Toluene-d8	102 %	70-130			"	"	"	"	
Surrogate: 4-Bromofluorobenzene	104 %	70-130			"	"	"	"	

**Metals (Saturated Paste Prep)**

Calcium	3.41		me/L	1	[none]		11/06/2019	11/11/2019	
Magnesium	1.38		"	"	"		"	"	
Sodium	1.15		"	"	"		"	"	

**pH in Soil by EPA 9045D**

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**SS-06@3'**

**11/4/2019 1:23:00PM**

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

**Origins Laboratory, Inc.**  
**Y911031-03 (Soil)**

**pH in Soil by EPA 9045D**

pH	8.08		pH Units	1	B9K0503	DJL	11/05/2019	11/05/2019	
----	------	--	----------	---	---------	-----	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	0.74			1	[none]		11/06/2019	11/11/2019	
-----	------	--	--	---	--------	--	------------	------------	--

**Specific Conductance by Modified 9050A**

Specific Conductance (EC)	0.0874	0.00500	mmhos/cm	1	B9K0504	DJL	11/05/2019	11/05/2019	
---------------------------	--------	---------	----------	---	---------	-----	------------	------------	--

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**FS-02@6'**

**11/4/2019 1:29:00PM**

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

**Origins Laboratory, Inc.**  
**Y911031-04 (Soil)**

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9K0502	KDK	11/05/2019	11/05/2019	U
<i>Surrogate: o-Terphenyl</i>	79.1 %	50-150			"	"	"	"	

**GBTEX + Naphthalene by EPA 8260D**

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9K0501	KDK	11/05/2019	11/05/2019	U
Benzene	ND	0.002	"	"	"	KDK	"	"	U
Toluene	ND	0.002	"	"	"	KDK	"	"	U
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	ND	0.002	"	"	"	KDK	"	"	U
Naphthalene	ND	0.008	"	"	"	KDK	"	"	U
<i>Surrogate: 1,2-Dichloroethane-d4</i>	94.6 %	70-130			"	"	"	"	
<i>Surrogate: Toluene-d8</i>	91.4 %	70-130			"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>	93.1 %	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.  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**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 B9K0501 - EPA 5030 (soil)**

**Blank (B9K0501-BLK1)**

Prepared: 11/05/2019 Analyzed: 11/05/2019

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	0.13		"	0.125		101	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		93.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.6	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.  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**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 B9K0501 - EPA 5030 (soil)**

**LCS (B9K0501-BS1)**

Prepared: 11/05/2019 Analyzed: 11/05/2019

Benzene	0.099	0.002	mg/kg	0.100		98.9	70-130			
Toluene	0.102	0.002	"	0.100		102	70-130			
Ethylbenzene	0.086	0.002	"	0.100		86.1	70-130			
m,p-Xylene	0.183	0.004	"	0.200		91.4	70-130			
o-Xylene	0.095	0.002	"	0.100		94.9	70-130			
Naphthalene	0.106	0.008	"	0.100		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.1	70-130			
Surrogate: 4-Bromofluorobenzene	0.11		"	0.125		90.9	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.  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**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 B9K0501 - EPA 5030 (soil)

Matrix Spike (B9K0501-MS1)	Source: Y911031-01			Prepared: 11/05/2019 Analyzed: 11/05/2019						
Benzene	0.080	0.002	mg/kg	0.100	ND	80.3	70-130			
Toluene	0.084	0.002	"	0.100	ND	84.1	70-130			
Ethylbenzene	0.080	0.002	"	0.100	ND	80.1	70-130			
m,p-Xylene	0.157	0.004	"	0.200	ND	78.6	70-130			
o-Xylene	0.082	0.002	"	0.100	ND	81.6	70-130			
Naphthalene	0.112	0.008	"	0.100	ND	112	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.8	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		98.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		94.6	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.  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

**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 B9K0501 - EPA 5030 (soil)

Matrix Spike Dup (B9K0501-MSD1)	Source: Y911031-01			Prepared: 11/05/2019 Analyzed: 11/05/2019						
Benzene	0.079	0.002	mg/kg	0.100	ND	78.8	70-130	1.99	20	
Toluene	0.075	0.002	"	0.100	ND	74.9	70-130	11.6	20	
Ethylbenzene	0.072	0.002	"	0.100	ND	71.9	70-130	10.8	20	
m,p-Xylene	0.145	0.004	"	0.200	ND	72.3	70-130	8.31	20	
o-Xylene	0.075	0.002	"	0.100	ND	75.0	70-130	8.51	20	
Naphthalene	0.098	0.008	"	0.100	ND	98.3	70-130	13.4	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.1	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		89.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		93.0	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.  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B9K0502 - EPA 3580</b>										
<b>Blank (B9K0502-BLK1)</b>										
					Prepared: 11/05/2019 Analyzed: 11/05/2019					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Surrogate: o-Terphenyl	21		"	25.0		83.7	50-150			

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

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

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

**Batch B9K0502 - EPA 3580**

**LCS (B9K0502-BS1)**

Prepared: 11/05/2019 Analyzed: 11/05/2019

Diesel (C10-C28)	989	50.0	mg/kg	1000		98.9	70-130			
Surrogate: o-Terphenyl	51		"	50.0		102	50-150			

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

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

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

**Batch B9K0502 - EPA 3580**

<b>Matrix Spike (B9K0502-MS1)</b>	<b>Source: Y911031-01</b>			Prepared: 11/05/2019 Analyzed: 11/05/2019						
Diesel (C10-C28)	866	50.0	mg/kg	1000	23.0	84.3	70-130			
Surrogate: <i>o</i> -Terphenyl	45		"	50.0		90.9	50-150			

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

Martin C Eckert III  
 Project Number: N/A  
 Project: Noble - UPRC 25-1117, 1217, 1317, 1417

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

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

**Batch B9K0502 - EPA 3580**

<b>Matrix Spike Dup (B9K0502-MSD1)</b>	<b>Source: Y911031-01</b>			Prepared: 11/05/2019 Analyzed: 11/05/2019						
Diesel (C10-C28)	864	50.0	mg/kg	1000	23.0	84.1	70-130	0.264	35	
Surrogate: o-Terphenyl	48		"	50.0		95.4	50-150			

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

Martin C Eckert III  
Project Number: N/A  
Project: Noble - UPRC 25-1117, 1217, 1317, 1417

---

**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.



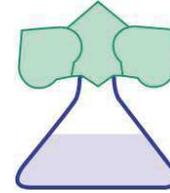
*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

# American Agricultural Laboratory, Inc.

700 West D Street / PO Box 370 / McCook, Nebraska 69001

Office: 308-345-3670 / FAX: 308-345-7880

www.AmAgLab.com



95029

ORIGINS LABORATORY INC

1725 ELK PLACE

DENVER CO 80211

NAME : ORIGINS LAB

DATE RECEIVED: 11/06/2019

DATE REPORTED: 11/11/2019

## SOIL TEST RESULTS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	Depth Inches	pH		EL	SOLUBLE SALTS mod. SP mmhos/cm	OM LOI %	NITRATE-N (FIA)		PHOSPHORUS						
				1 : 1 Soil	Buffer Woodruff				ppm	lbs/A	P1 ppm	Bicarb ppm	P2 ppm	M2 ppm	M3 ppm		
2659239	Y911031	01	0-8														
2659240	Y911031	03	0-8														

LAB NUMBER	SULFATE-S Ca-P ppm	NH4OAc (Exchangeable)				DTPA				BORON Sorbitol ppm	EST. CATION EXCHANGE CAPACITY (CEC) me/100g	% SATURATION						
		K ppm	Ca ppm	Mg ppm	Na ppm	Zn ppm	Fe ppm	Mn ppm	Cu ppm			BASE	H	Ca	Mg	K	Na	
2659239																		
2659240																		

LAB NUMBER	SOLUBLE (SAT. EXT.)			SODIUM ADSORPTION RATIO (SAR)	EXCH. SODIUM PERCENT (ESP)	GYPSUM REQ T/A	PARTICLE SIZE ANALYSIS				CHLORIDE		EXCH. NH4-N		ALUMINUM ppm	TOTAL N %
	Ca me/L	Mg me/L	Na me/L				SAND %	SILT %	CLAY %	SOIL TEXTURE		ppm	lbs/A	ppm		
2659239	4.82	2.02	0.76	0.41	1	0										
2659240	3.41	1.38	1.15	0.74	1	0										

## SUGGESTED FERTILIZER RECOMMENDATIONS

LAB NUMBER	FIELD IDENTIFICATION	SAMPLE IDENTIFICATION	CROP TO BE GROWN	YIELD GOAL	N	P2O5	K2O	S	Zn	MgO	Fe	Mn	Cu	B	Cl	LIME REC 60% ECCE T/A
2659239	Y911031	01														
2659240	Y911031	03														

Analysis By: American Agricultural Lab

Recommendations By: American Agricultural Lab



Your Lab's letterhead here...

Address

City, St. Zip

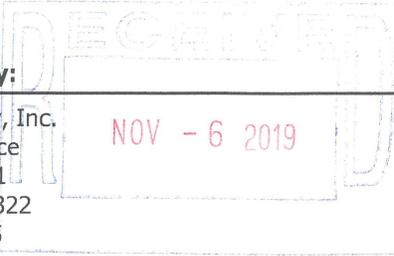
Phone/Fax

# SUBCONTRACT ORDER

**Sending Laboratory:**

Origins Laboratory, Inc.  
1725 West Elk Place  
Denver, CO 80211  
Phone: 303.433.1322  
Fax: 303.265.9645

Project Manager: Noelle Doyle Mathis

**Subcontracted Laboratory:**

American Agricultural Laboratory, Inc  
210 East 1st Street  
McCook, NE 69001  
Phone: (308) 345-3670  
Fax: (308) 345-7880

**Work Order: Y911031**

Analysis	Due	Expires	Comments
<b>Sample ID: Y911031-01 Soil Sampled: 11/04/2019 13:12</b>			
878 SAR (Saturated Paste Prep)	11/11/2019	11/05/2019 13:12	
<i>Containers Supplied:</i>			
<b>Sample ID: Y911031-03 Soil Sampled: 11/04/2019 13:23</b>			
879 SAR (Saturated Paste Prep)	11/11/2019	11/05/2019 13:23	
<i>Containers Supplied:</i>			

Released By

Date

11/5/19

Received By

Date