



EAGLE
ENVIRONMENTAL
CONSULTING, INC.

4101 Inca Street, Denver, CO 80211 • Phone: 303-433-0479 • Fax: 303-325-5449 • www.eagle-enviro.com

November 7, 2017

Mr. Jacob Evans
Noble Energy, Inc.
2115 117th Avenue
Greeley, Colorado 80631

Adolph #F 21-14
Water Vault Removal
40.378187 / -104.671883
SE¼ SW¼ SEC.21 T5N R65W 6PM
Weld County, Colorado
Location ID 328548

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present the results from the water vault removal at the Adolph #F 21-14 site (site).

On October 3, 2017, EAGLE collected soil samples and a grab groundwater sample following the removal of the water vault at the site. Per Noble Standard Operation Procedures, a soil sample was collected from each sidewall for field screening. Groundwater was observed at a depth of approximately 4 feet below ground surface (bgs), and therefore a floor soil sample was not collected. The sidewall soil sample with the highest photoionization detector (PID) reading (SS-04@2') and the grab groundwater sample (GW-01) were submitted for laboratory analysis.

Based on laboratory analytical results, soil sample SS-04@2' did not contain concentrations of benzene, toluene, ethylbenzene, total xylenes (BTEX), naphthalene, or total petroleum hydrocarbons (TPH) exceeding Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 regulatory limits. Grab groundwater sample, GW-01, did not contain concentrations of BTEX exceeding applicable COGCC Table 910-1 regulatory limits. Additionally, the sidewall soil sample's (SS-04@2') 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

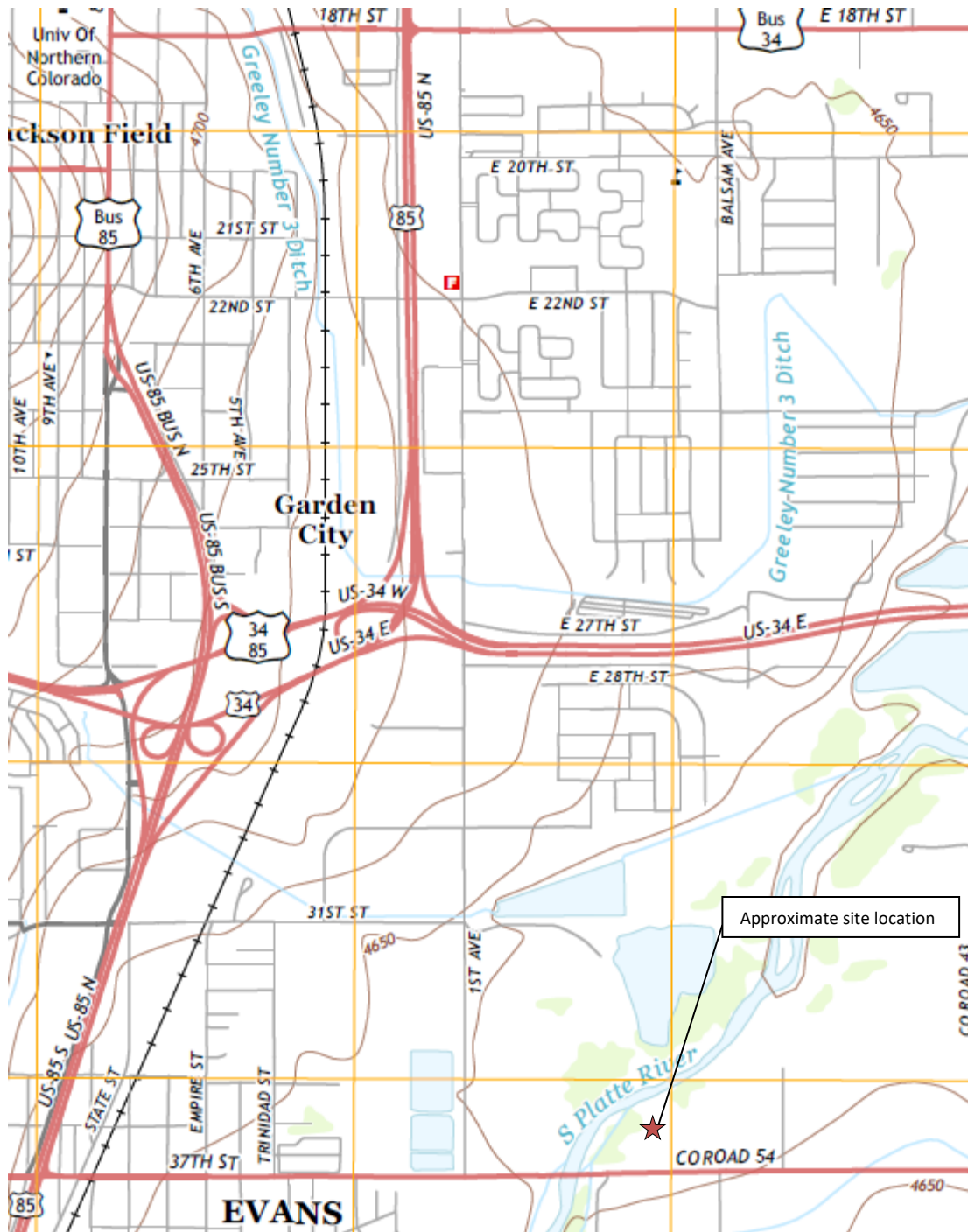


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Sample Analytical Map



Topographic Site Location Map

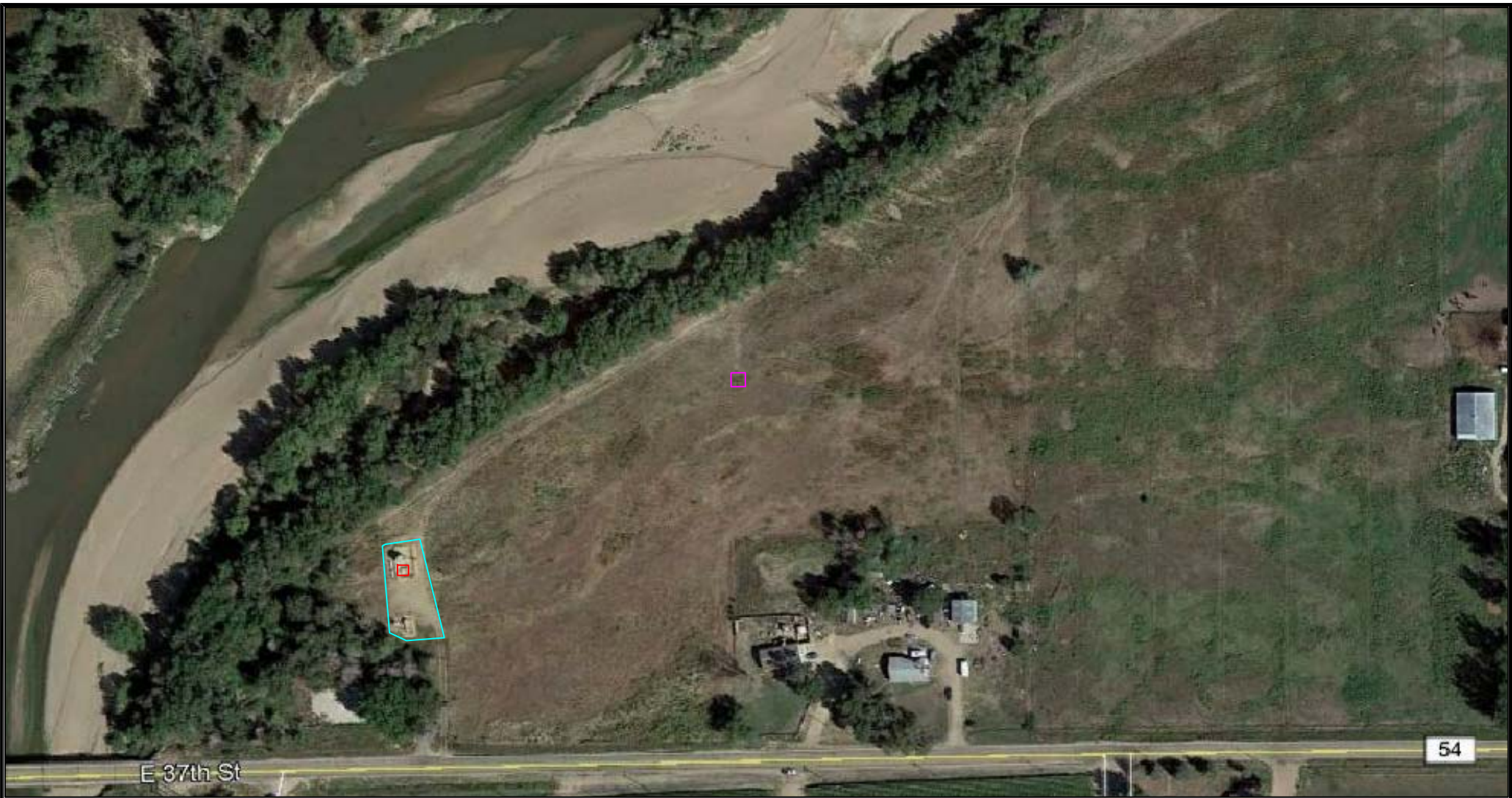
Adolph #F 21-14
 Water Vault Removal
 40.378187/-104.671883
 SE¼ SW¼ SEC.21 T5N R65W 6PM
 Weld County, Colorado
 Location ID 328548






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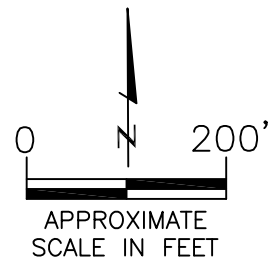
Source: USGS 7.5 Minute Topographic Map, Greeley, CO Quadrangle 2013

Figure 1



LEGEND

-  ADOLPH #F 21-14 TANK BATTERY
-  ADOLPH #F 21-14 WELL HEAD
-  APPROXIMATE LOCATION OF WATER VAULT REMOVAL



AERIAL SITE LOCATION MAP
ADOLPH #F 21-14
WATER VAULT REMOVAL
40.378187 / -104.671883
SE1/4 SW1/4 SEC.21 T5N R65W 6PM
WELD COUNTY, COLORADO
LOCATION ID 328548

DATE:
10/09/17

FIG. NO.
2

DRAWN BY:
ar



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



SS-04@2'
10/03/17
2'
B = <0.002
T = <0.002
E = <0.002
X = <0.002
N = <0.007
G = <0.200
D = <50.0
EC = 0.0559
SAR = 1.49
pH = 7.95

GW-01
10/03/17
B = <4.00
T = <4.00
E = <4.00
X = <4.00

LEGEND

- — — APPROXIMATE EXCAVATION BOUNDARIES
- SS-01 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD ANALYZED WITH PHOTOIONIZATION DETECTOR (PID)
- SS-02 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

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

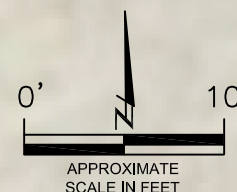
- GW-01 APPROXIMATE LOCATION OF GROUNDWATER SAMPLE SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

GROUNDWATER 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

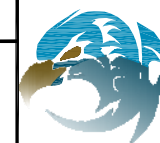
SAMPLE ANALYTICAL MAP
ADOLPH #F 21-14
WATER VAULT REMOVAL
40.378187/-104.671883
SE1/4 SW1/4 SEC.21 T5N R65W 6PM
WELD COUNTY, COLORADO
LOCATION ID 328548



DATE: 11/01/17

FIG. NO. 3

DRAWN BY: ar



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



ATTACHMENT A

Laboratory Analytical Report



October 10, 2017

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Adolph F 21-14

Project Number - [none]

Attached are your analytical results for Noble - Adolph F 21-14 received by Origins Laboratory, Inc. October 03, 2017. This project is associated with Origins project number Y710041-01.

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: Noble - Adolph F 21-14

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-04@2'	Y710041-01	Soil	October 3, 2017 14:30	10/03/2017 15:47
GW-01	Y710041-02	Water	October 3, 2017 14:10	10/03/2017 15:47

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: Noble - Adolph F 21-14

www.originslaboratory.com

page 1 of 1

ORIGINS LABORATORY, INC

Client: ORIGINS ENV CONSULTING

Address: 4101 INCA ST

DENVER, CO

Telephone Number: 303 433 0479

Email Address: MCE3@eagle-enviro.com

Project Manager: MARTIN ECKERT III

Project Name: ADOLPH F 21-14

Project Number: ---

Samples Collected By: AR

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions		
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa	Other	GC/MS	GC	GC/MS		GC/MS	
55-04 (2)	10/31/17	1430	2	X					X								
62-01	10/31/17	1410	3	X					X								
Relinquished By: <u>[Signature]</u>	Date: <u>10/31/17</u>	Time: <u>1547</u>	Received By: <u>[Signature]</u>	Date: <u>10-3-17</u>	Time: <u>1547</u>	Turnaround Time: <input type="checkbox"/> Same Day <input type="checkbox"/> 24 Hr <input checked="" type="checkbox"/> 48 Hr <input type="checkbox"/> 72 Hr <input checked="" type="checkbox"/> Standard											
Relinquished By: <u>[Signature]</u>	Date: <u> </u>	Time: <u> </u>	Received By: <u> </u>	Date: <u> </u>	Time: <u> </u>												

1725 Elk Place

Denver, CO 80211

Phone: 303.433.1322

Fax: 303.265.9645

Temp Received: 27

Date Results Needed: Noble

BCU TO HOWARD

Origins Laboratory, Inc.

Jefe Pellegrini

Jen Pellegrini For Noelle Doyle Mathis, President

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: Noble - Adolph F 21-14

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: Y710041

Client: Eagle Env.

Client Project ID: Noble - Adolph F 21-14

Checklist Completed by: Dan L.

Shipped Via: HD

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

Date/time completed: 10-3-17 1556

Airbill #: NA

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

Cooler Number/Temperature: ☒ 2-7 °C ☐ _____ °C ☐ _____ °C (Describe)

Thermometer ID: KB3

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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>YH</u>
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are samples preserved that require preservation and was it checked ⁽¹⁾ ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity) / (pH < 2 for samples preserved with HNO ₃ , HCL, H ₂ SO ₄) / (pH > 10 for samples preserved with NaAsO ₂ +NaOH, ZnAc+NaOH)	<input 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: JP (Project Manager)

Date/Time Reviewed: 10/14/17

Origins Laboratory, Inc.

Jefe Pellegrini

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Adolph F 21-14

SS-04@2'
10/3/2017 2:30:00PM

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

Origins Laboratory, Inc.
Y710041-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B7J0904	10/09/2017	10/09/2017	U
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Surrogate: o-Terphenyl	87.4 %	59-131			"	"	"	
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GBTEX + Napthalene by 8260C

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B7J0903	10/09/2017	10/09/2017	U
Benzene	ND	0.002	"	"	"	"	"	U
Toluene	ND	0.002	"	"	"	"	"	U
Ethylbenzene	ND	0.002	"	"	"	"	"	U
Xylenes, total	ND	0.002	"	"	"	"	"	U
Naphthalene	ND	0.007	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	106 %	70-130			"	"	"	
Surrogate: Toluene-d8	97.0 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.8 %	70-130			"	"	"	

Metals (Saturated Paste Prep)

Calcium	4.56		me/L	1	'[none]'	10/04/2017	10/06/2017	
Magnesium	2.44		"	"	"	"	"	
Sodium	2.78		"	"	"	"	"	

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.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Adolph F 21-14

SS-04@2'

10/3/2017 2:30:00PM

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

Origins Laboratory, Inc.
Y710041-01 (Soil)

pH in Soil by EPA 9045D

pH	7.95	pH Units	1	B7J0905	10/09/2017	10/09/2017
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SAR by 20B Saturated Paste

SAR	1.49		1	'[none]'	10/04/2017	10/06/2017
-----	------	--	---	----------	------------	------------

Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0559	mmhos/cm	1	B7J0906	10/09/2017	10/09/2017
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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: Noble - Adolph F 21-14

GW-01

10/3/2017 2:10:00PM

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

Origins Laboratory, Inc.

Y710041-02 (Water)

BTEX by EPA 8260C

Benzene	ND	4.00	ug/L	4	B7J0601	10/06/2017	10/07/2017	U
Toluene	ND	4.00	"	"	"	"	"	U
Ethylbenzene	ND	4.00	"	"	"	"	"	U
Xylenes, total	ND	4.00	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4

100 % 84-121

"

"

"

Surrogate: Toluene-d8

98.9 % 85-115

"

"

"

Surrogate: 4-Bromofluorobenzene

100 % 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: Noble - Adolph F 21-14

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 B7J0601 - EPA 5030B (Water)

Blank (B7J0601-BLK1)

Prepared: 10/06/2017 Analyzed: 10/06/2017

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	63		"	62.5	101		84-121			
Surrogate: Toluene-d8	62		"	62.5	99.5		85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5	101		84-114			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Adolph F 21-14

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 B7J0601 - EPA 5030B (Water)

LCS (B7J0601-BS1)

Prepared: 10/06/2017 Analyzed: 10/06/2017

Benzene	43.8	1.00	ug/L	50.0		87.7	73.3-129			
Toluene	44.7	1.00	"	50.0		89.4	76.2-123			
Ethylbenzene	46.2	1.00	"	50.0		92.5	73.6-130			
m,p-Xylene	94.6	2.00	"	100		94.6	76.1-126			
o-Xylene	44.7	1.00	"	50.0		89.4	76.6-124			
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	84-121			
Surrogate: Toluene-d8	62		"	62.5		99.6	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	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: Noble - Adolph F 21-14

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 B7J0601 - EPA 5030B (Water)

Matrix Spike (B7J0601-MS1)		Source: Y710030-07			Prepared: 10/06/2017 Analyzed: 10/06/2017					
Benzene	49.7	1.00	ug/L	50.0	ND	99.3	74-130			
Toluene	50.8	1.00	"	50.0	ND	102	73-131			
Ethylbenzene	53.1	1.00	"	50.0	ND	106	76-132			
m,p-Xylene	106	2.00	"	100	ND	106	69-139			
o-Xylene	49.6	1.00	"	50.0	0.140	99.0	74-131			
Surrogate: 1,2-Dichloroethane-d4	67		"	62.5		107	84-121			
Surrogate: Toluene-d8	62		"	62.5		98.5	85-115			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	84-114			

Origins Laboratory, Inc.



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Jen Pellegrini For Noelle Doyle Mathis, President

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Adolph F 21-14

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 B7J0601 - EPA 5030B (Water)

Matrix Spike Dup (B7J0601-MSD1)		Source: Y710030-07			Prepared: 10/06/2017 Analyzed: 10/06/2017					
Benzene	46.9	1.00	ug/L	50.0	ND	93.7	74-130	5.80	20	
Toluene	47.7	1.00	"	50.0	ND	95.3	73-131	6.26	20	
Ethylbenzene	50.4	1.00	"	50.0	ND	101	76-132	5.24	20	
m,p-Xylene	101	2.00	"	100	ND	101	69-139	4.57	20	
o-Xylene	47.5	1.00	"	50.0	0.140	94.7	74-131	4.45	20	
Surrogate: 1,2-Dichloroethane-d4	66		"	62.5		105	84-121			
Surrogate: Toluene-d8	61		"	62.5		97.8	85-115			
Surrogate: 4-Bromofluorobenzene	64		"	62.5		102	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: Noble - Adolph F 21-14

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 B7J0903 - EPA 5030 (soil)										
Blank (B7J0903-BLK1)					Prepared: 10/09/2017 Analyzed: 10/09/2017					
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	0.007	"							U
Surrogate: 1,2-Dichloroethane-d4	64		ug/kg	62.5		103	70-130			
Surrogate: Toluene-d8	60		"	62.5		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	61		"	62.5		97.1	70-130			

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: Noble - Adolph F 21-14

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 B7J0903 - EPA 5030 (soil)										
LCS (B7J0903-BS1)					Prepared: 10/09/2017 Analyzed: 10/09/2017					
Benzene	0.093	0.002	mg/kg	0.100		92.9	70-130			
Toluene	0.094	0.002	"	0.100		94.2	70-130			
Ethylbenzene	0.090	0.002	"	0.100		90.2	70-130			
m,p-Xylene	0.176	0.004	"	0.200		88.2	70-130			
o-Xylene	0.088	0.002	"	0.100		88.2	70-130			
Naphthalene	0.094	0.007	"	0.100		93.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	61		"	62.5		98.0	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.7	70-130			

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Project: Noble - Adolph F 21-14

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 B7J0903 - EPA 5030 (soil)										
Matrix Spike (B7J0903-MS1)		Source: Y710039-01			Prepared: 10/09/2017 Analyzed: 10/09/2017					
Benzene	2.83	0.050	mg/kg	2.50	ND	113	70-130			
Toluene	2.79	0.050	"	2.50	ND	112	70-130			
Ethylbenzene	2.70	0.050	"	2.50	0.046	106	70-130			
m,p-Xylene	5.20	0.100	"	5.00	0.068	103	70-130			
o-Xylene	2.58	0.050	"	2.50	ND	103	70-130			
Naphthalene	2.68	0.175	"	2.50	0.048	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	65		ug/kg	62.5		105	70-130			
Surrogate: Toluene-d8	63		"	62.5		101	70-130			
Surrogate: 4-Bromofluorobenzene	59		"	62.5		95.0	70-130			

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Project: Noble - Adolph F 21-14

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 B7J0903 - EPA 5030 (soil)										
Matrix Spike Dup (B7J0903-MSD1)		Source: Y710039-01			Prepared: 10/09/2017 Analyzed: 10/09/2017					
Benzene	2.89	0.050	mg/kg	2.50	ND	116	70-130	2.13	20	
Toluene	2.80	0.050	"	2.50	ND	112	70-130	0.322	20	
Ethylbenzene	2.76	0.050	"	2.50	0.046	108	70-130	2.16	20	
m,p-Xylene	5.31	0.100	"	5.00	0.068	105	70-130	2.00	20	
o-Xylene	2.66	0.050	"	2.50	ND	106	70-130	2.94	20	
Naphthalene	2.87	0.175	"	2.50	0.048	113	70-130	6.82	20	
Surrogate: 1,2-Dichloroethane-d4	67		ug/kg	62.5		107	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	60		"	62.5		96.8	70-130			

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Martin C Eckert III
Project Number: [none]
Project: Noble - Adolph F 21-14

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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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
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Batch B7J0904 - EPA 3580

Blank (B7J0904-BLK1)

Prepared: 10/09/2017 Analyzed: 10/09/2017

Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	55		"	50.0		110	59-131			

LCS (B7J0904-BS1)

Prepared: 10/09/2017 Analyzed: 10/09/2017

Diesel (C10-C28)	1110	50.0	mg/kg	1000		111	64-121			
Surrogate: o-Terphenyl	53		"	50.0		106	59-131			

Matrix Spike (B7J0904-MS1)

Source: Y710038-01

Prepared: 10/09/2017 Analyzed: 10/09/2017

Diesel (C10-C28)	1040	50.0	mg/kg	1000	18.0	102	53-125			
Surrogate: o-Terphenyl	48		"	50.0		96.8	59-131			

Matrix Spike Dup (B7J0904-MSD1)

Source: Y710038-01

Prepared: 10/09/2017 Analyzed: 10/09/2017

Diesel (C10-C28)	1010	50.0	mg/kg	1000	18.0	99.3	53-125	2.83	20	
Surrogate: o-Terphenyl	49		"	50.0		98.8	59-131			

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Martin C Eckert III
Project Number: [none]
Project: Noble - Adolph F 21-14

Classical Chemistry Parameters - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B7J0905 - NO PREP										
Duplicate (B7J0905-DUP1)		Source: Y710041-01			Prepared: 10/09/2017 Analyzed: 10/09/2017					
pH	7.22		pH Units		7.95			9.62	25	
Batch B7J0906 - NO PREP										
Blank (B7J0906-BLK1)		Prepared: 10/09/2017 Analyzed: 10/09/2017								
Specific Conductance (EC)	0.00540		mmhos/cm							
Duplicate (B7J0906-DUP1)		Source: Y710041-01			Prepared: 10/09/2017 Analyzed: 10/09/2017					
Specific Conductance (EC)	0.0590		mmhos/cm		0.0559			5.40	25	

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: Noble - Adolph F 21-14

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

www.AmAgLab.com

DATE REPORTED: 10/06/2017

[illegible][illegible]

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

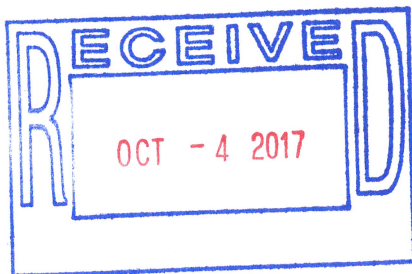
Project Manager: Noelle Doyle Mathis

Subcontracted Laboratory:

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

Work Order: Y710041

Analysis	Due	Expires	Comments
Sample ID: Y710041-01 Soil Sampled: 10/03/2017 14:30			
SAR (Saturated Paste Prep)	10/10/2017	10/04/2017 14:30	
Containers Supplied:			



Released By

Date

Received By

Date