



EAGLE
ENVIRONMENTAL
CONSULTING, INC.

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

June 12, 2019

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

**Maury O #13-3, 6
Water Vault Removal
40.318808 / -104.839346
Ne¼ NW¼ SEC.13 T4N R67W 6PM
Weld County, Colorado
Remediation # 13654**

Dear Mr. Evans,

Eagle Environmental Consulting, Inc. (EAGLE) is pleased to present the results from the water vault removal at the Maury O #13-3, 6 site (site).

On May 30, 2019, EAGLE collected soil samples following the removal of the water vault 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 sample with the highest photoionization detector (PID) reading (SS-04@3') and the floor soil sample (SS-05@6') were submitted for laboratory analysis.

Based on laboratory analytical results, the soil samples (SS-04@3' and SS-05@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-04@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

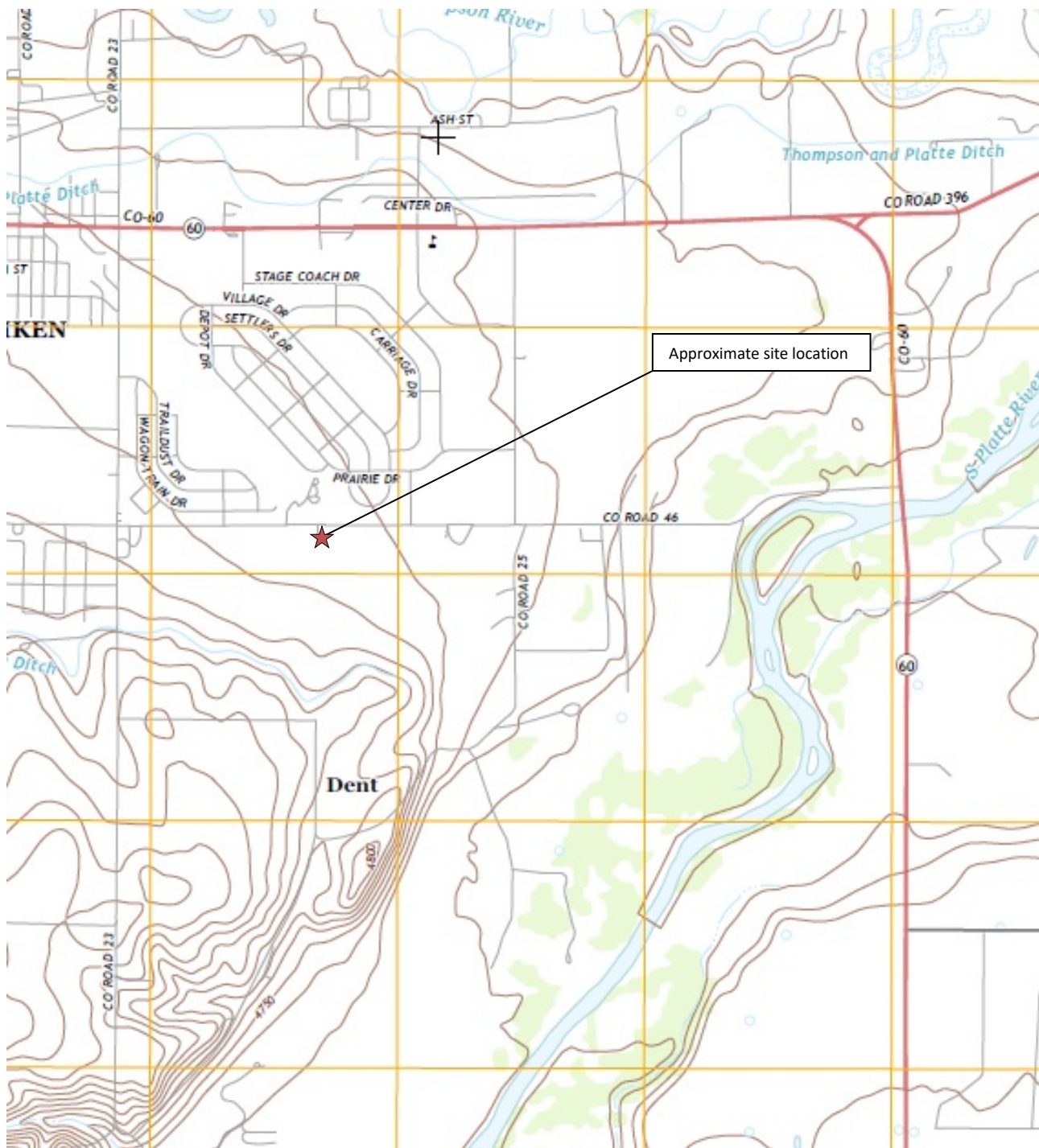


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map



Topographic Site Location Map

Maury O #13-3, 6
 Water Vault Removal
 40.318808 / -104.839346
 NE¼ NW¼ SEC.13 T4N R67W 6PM
 Weld County, Colorado
 Remediation # 13654

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

Figure 1

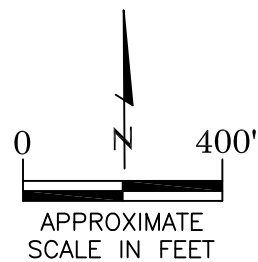


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LEGEND

- MAURY O #13-3, 6 TANK BATTERY
- MAURY O #13-3 WELL HEAD
- MAURY O #13-6 WELL HEAD
- APPROXIMATE LOCATION OF WATER VAULT REMOVAL



AERIAL SITE LOCATION MAP
 MAURY O #13-3, 6
 WATER VAULT REMOVAL
 40.318808 / -104.839346
 NE1/4 NW1/4 SEC.13 T4N R67W 6PM
 WELD COUNTY, COLORADO
 REMEDIATION # 13654

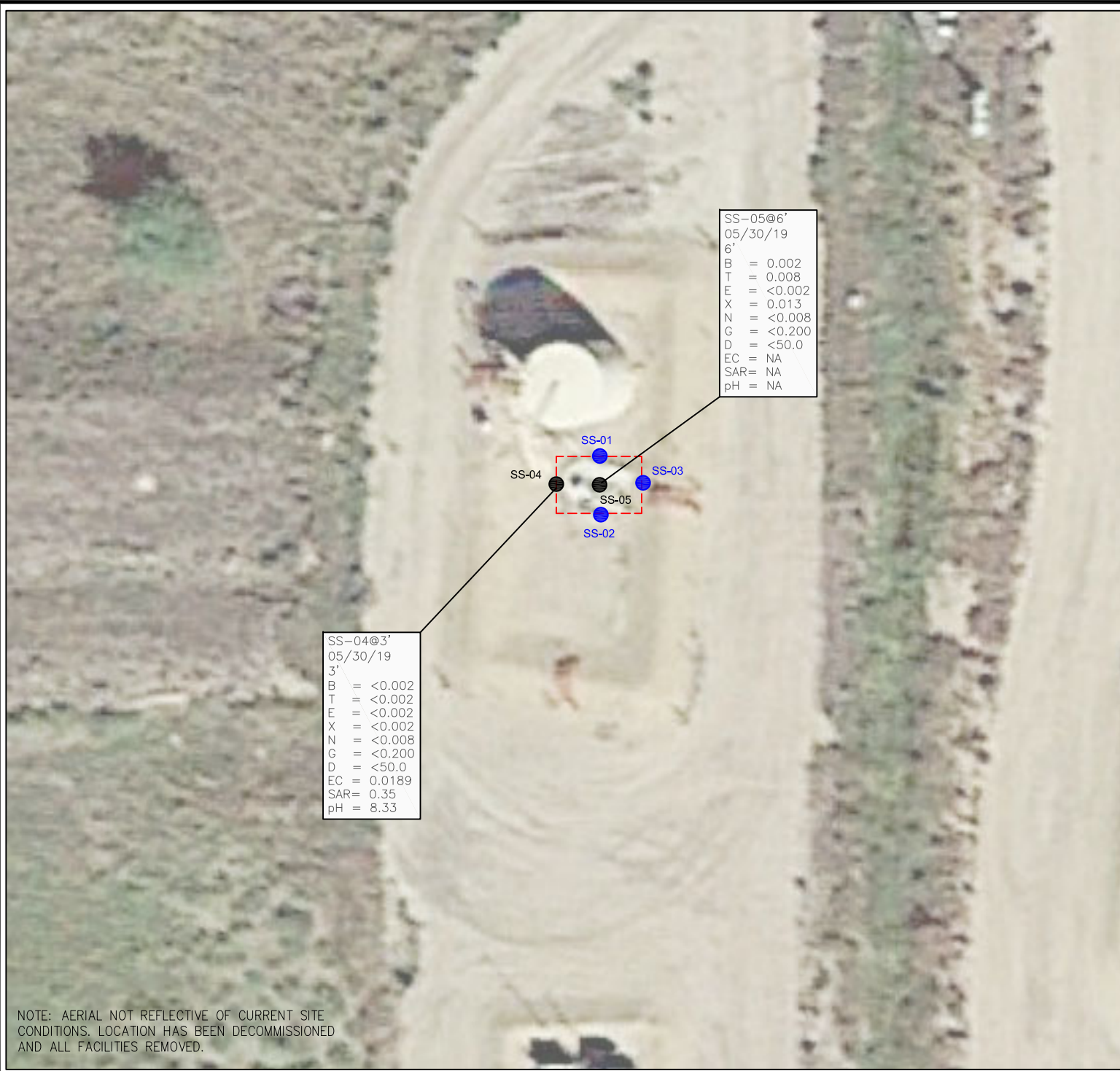
DATE: 05/31/19

FIG. NO.
2

DRAWN BY:
amn



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



NOTE: AERIAL NOT REFLECTIVE OF CURRENT SITE CONDITIONS. LOCATION HAS BEEN DECOMMISSIONED AND ALL FACILITIES REMOVED.

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

PARAMETERS

SOIL SAMPLE LOCATION
DATE
DEPTH (FEET)
B = BENZENE (mg/kg)
T = TOLUENE (mg/kg)
E = ETHYLBENZENE (mg/kg)
X = TOTAL XYLENES (mg/kg)
N = NAPHTHALENE (mg/kg)
G = TPH-GRO (mg/kg)
D = TPH-DRO (mg/kg)
EC = SPECIFIC CONDUCTANCE (mmhos/cm)
SAR = SODIUM ADSORPTION RATIO
pH = pH (pH UNITS)

mg/kg = MILLIGRAMS PER KILOGRAM

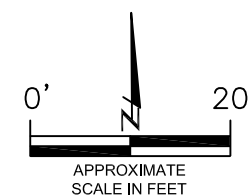
mmhos/cm = MILLIHOS PER CENTIMETER

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
MAURY O #13-3.6
WATER VAULT REMOVAL
40.318808 / -104.8393460
NE1/4 NW1/4 SEC.13 T4N R67W 6PM
WELD COUNTY, COLORADO
REMEDATION # 13654

DATE:
06/10/19

DRAWN BY:
KTP

FIG.
NO. 3



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



ATTACHMENT A

Laboratory Analytical Report



June 05, 2019

Eagle Environmental Consulting, Inc.

Martin C Eckert III

4101 Inca Street

Denver

CO 80211

Project Name - Noble - Maury O #13-3,6

Project Number - [none]

Attached are your analytical results for Noble - Maury O #13-3,6 received by Origins Laboratory, Inc. May 30, 2019. This project is associated with Origins project number Y905455-01.

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 - Maury O #13-3,6

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-04@3'	Y905455-01	Soil	May 30, 2019 10:35	05/30/2019 17:18
SS-05@6'	Y905455-02	Soil	May 30, 2019 10:37	05/30/2019 17:18

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, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Maury O #13-3,6

www.originslaboratory.com

page 1 of 1

9905455

Project Manager: MARTIN ECKERT III

Project Name: MAURY O #13-3,6

Project Number: _____

Samples Collected By: KA

Client: EAGLE ENV CONSULTING

Address: 4101 INCA ST.

DENVER, CO

Telephone Number: 303-433-0479

Email Address: MICHAEL@EAGLE-ENV.COM

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions	
				Unpreserved	HCl	HNO ₃	Other	Groundwater	Soil	Air Summa #	Other	BTEX	LOD	DRO		LABORATORY
55-04 E3	5-30-19	1035	2	X					X				X	X	X	1
55-05 E6	5-30-19	1037	2	X					X				X	X	X	2
																3
																4
																5
																6
																7
																8
																9
																10

Relinquished By: ME Date: 5-30-19 Time: 1718

Relinquished By: _____ Date: _____ Time: _____

Received By: ME Date: 5-30-19 Time: 1718

Received By: _____ Date: _____ Time: _____

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

1725 Elk Place

Denver, CO 80211

Phone: 303.433.1322

Fax: 303.265.9645

PL: 815902437 # 7114-2

LPL: 247039 HOWARD

Date Results Needed: 5-14 Temp Received: 5-14

NOBLE

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: Noble - Maury O #13-3,6

Origins Laboratory

F-012207-01-R1

Effective Date: 01/09/12

Sample Receipt Checklist

Origins Work Order: Y405455

Client: Eagle Env

Client Project ID: Noble-maur

Checklist Completed by: JG

Shipped Via: HD

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

Date/time completed: 5/31/19

Airbill #: NA

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

Cooler Number/Temperature: 1 / 5.4 °C °C °C °C (Describe)

Thermometer ID: TDOB

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are short holding time analytes or samples with HTs due within 48 hours present ⁽¹⁾ ?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client with date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

⁽¹⁾if NO, then contact the client before proceeding with analysis and note date/time and person contacted as well as the corrective action to in the additional comments (above) and the case narrative.

Reviewed by (Project Manager)

Date/Time Reviewed

Origins Laboratory, Inc.

Jefe Pellegrini

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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Maury O #13-3,6

SS-04@3'

5/30/2019 10:35:00AM

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

Origins Laboratory, Inc.
Y905455-01 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9E3102	JTD	05/31/2019	05/31/2019	U
------------------	----	------	-------	---	---------	-----	------------	------------	---

Surrogate: o-Terphenyl	85.0 %	50-150			"	"	"		
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GBTEX + Naphthalene by EPA 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9E3101	KDK	05/31/2019	05/31/2019	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	104 %	70-130			"	"	"		
Surrogate: Toluene-d8	99.2 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"		

Metals (Saturated Paste Prep)

Calcium	2.92	me/L	1	'[none]'		06/03/2019	06/04/2019
Magnesium	1.24	"	"	"		"	"
Sodium	0.50	"	"	"		"	"

pH in Soil by EPA 9045D

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 - Maury O #13-3,6

SS-04@3'

5/30/2019 10:35:00AM

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

Origins Laboratory, Inc.
Y905455-01 (Soil)

pH in Soil by EPA 9045D

pH	8.33		pH Units	1	B9E3103	OLAB	05/31/2019	05/31/2019	
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SAR by 20B Saturated Paste

SAR	0.35			1	'[none]'		06/03/2019	06/04/2019	
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Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.0189	0.00508	mmhos/cm	1	B9E3104	OLAB	05/31/2019	05/31/2019	
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Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Maury O #13-3,6

SS-05@6'

5/30/2019 10:37:00AM

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

Origins Laboratory, Inc.
Y905455-02 (Soil)

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

Diesel (C10-C28)	ND	50.0	mg/kg	1	B9E3102	JTD	05/31/2019	05/31/2019	U
------------------	----	------	-------	---	---------	-----	------------	------------	---

Surrogate: o-Terphenyl	82.7 %	50-150			"	"	"		
------------------------	--------	--------	--	--	---	---	---	--	--

GBTEX + Naphthalene by EPA 8260D

Gasoline Range Hydrocarbons	ND	0.200	mg/kg	1	B9E3101	KDK	05/31/2019	05/31/2019	U
Benzene	0.002	0.002	"	"	"	KDK	"	"	
Toluene	0.008	0.002	"	"	"	KDK	"	"	
Ethylbenzene	ND	0.002	"	"	"	KDK	"	"	U
Xylenes, total	0.013	0.002	"	"	"	KDK	"	"	
Naphthalene	ND	0.008	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	105 %	70-130			"	"	"		
Surrogate: Toluene-d8	97.4 %	70-130			"	"	"		
Surrogate: 4-Bromofluorobenzene	101 %	70-130			"	"	"		

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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 B9E3101 - EPA 5030 (soil)

Blank (B9E3101-BLK1)

Prepared: 05/31/2019 Analyzed: 05/31/2019

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		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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 B9E3101 - EPA 5030 (soil)										
LCS (B9E3101-BS1)					Prepared: 05/31/2019 Analyzed: 05/31/2019					
Benzene	0.099	0.002	mg/kg	0.100		98.8	70-130			
Toluene	0.097	0.002	"	0.100		96.9	70-130			
Ethylbenzene	0.102	0.002	"	0.100		102	70-130			
m,p-Xylene	0.211	0.004	"	0.200		106	70-130			
o-Xylene	0.106	0.002	"	0.100		106	70-130			
Naphthalene	0.104	0.008	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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 B9E3101 - EPA 5030 (soil)

Matrix Spike (B9E3101-MS1)		Source: Y905442-01			Prepared: 05/31/2019 Analyzed: 05/31/2019					
Benzene	0.090	0.002	mg/kg	0.100	ND	89.9	70-130			
Toluene	0.088	0.002	"	0.100	ND	87.5	70-130			
Ethylbenzene	0.092	0.002	"	0.100	ND	92.1	70-130			
m,p-Xylene	0.190	0.004	"	0.200	ND	95.0	70-130			
o-Xylene	0.097	0.002	"	0.100	ND	96.9	70-130			
Naphthalene	0.098	0.008	"	0.100	0.003	95.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

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

Martin C Eckert III
Project Number: [none]
Project: Noble - Maury O #13-3,6

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 B9E3101 - EPA 5030 (soil)										
Matrix Spike Dup (B9E3101-MSD1)		Source: Y905442-01			Prepared: 05/31/2019 Analyzed: 05/31/2019					
Benzene	0.089	0.002	mg/kg	0.100	ND	88.6	70-130	1.48	20	
Toluene	0.087	0.002	"	0.100	ND	86.8	70-130	0.849	20	
Ethylbenzene	0.092	0.002	"	0.100	ND	91.7	70-130	0.392	20	
m,p-Xylene	0.190	0.004	"	0.200	ND	95.1	70-130	0.0316	20	
o-Xylene	0.097	0.002	"	0.100	ND	96.6	70-130	0.248	20	
Naphthalene	0.098	0.008	"	0.100	0.003	95.1	70-130	0.163	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

Origins Laboratory, Inc.



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Jen Pellegrini, Project Manager

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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 B9E3102 - EPA 3550B

Blank (B9E3102-BLK1)

Prepared: 05/31/2019 Analyzed: 05/31/2019

Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	40		"	50.0		79.8	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.

Jen Pellegrini, Project Manager

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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 B9E3102 - EPA 3550B

Blank (B9E3102-BLK2)

Prepared: 05/31/2019 Analyzed: 05/31/2019

Diesel (C10-C28)	ND	50.0	mg/kg							U
Surrogate: o-Terphenyl	46		"	50.0		92.1	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.

Jen Pellegrini, Project Manager

Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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
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Batch B9E3102 - EPA 3550B

LCS (B9E3102-BS1)

Prepared: 05/31/2019 Analyzed: 05/31/2019

Diesel (C10-C28)	1010	50.0	mg/kg	1000		101	70-130			
Surrogate: o-Terphenyl	46		"	50.0		92.5	50-150			

Origins Laboratory, Inc.



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Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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
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Batch B9E3102 - EPA 3550B

LCS (B9E3102-BS2)

Prepared: 05/31/2019 Analyzed: 05/31/2019

Diesel (C10-C28)	953	50.0	mg/kg	1000		95.3	70-130			
Surrogate: o-Terphenyl	49		"	50.0		98.9	50-150			

Origins Laboratory, Inc.



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Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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
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Batch B9E3102 - EPA 3550B

Matrix Spike (B9E3102-MS1)		Source: Y905442-01			Prepared: 05/31/2019 Analyzed: 05/31/2019					
Diesel (C10-C28)	967	50.0	mg/kg	1000	14.7	95.2	70-130			
Surrogate: o-Terphenyl	49		"	50.0		98.8	50-150			

Origins Laboratory, Inc.



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Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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
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Batch B9E3102 - EPA 3550B

Matrix Spike (B9E3102-MS2)		Source: Y905455-02			Prepared: 05/31/2019 Analyzed: 05/31/2019					
Diesel (C10-C28)	919	50.0	mg/kg	1000	18.9	90.0	70-130			
Surrogate: o-Terphenyl	46		"	50.0		91.7	50-150			

Origins Laboratory, Inc.



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4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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
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Batch B9E3102 - EPA 3550B

Matrix Spike Dup (B9E3102-MSD1)		Source: Y905442-01			Prepared: 05/31/2019 Analyzed: 05/31/2019					
Diesel (C10-C28)	910	50.0	mg/kg	1000	14.7	89.5	70-130	6.08	35	
Surrogate: o-Terphenyl	45		"	50.0		90.9	50-150			

Origins Laboratory, Inc.



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4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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
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Batch B9E3102 - EPA 3550B

Matrix Spike Dup (B9E3102-MSD2)		Source: Y905455-02			Prepared: 05/31/2019 Analyzed: 05/31/2019					
Diesel (C10-C28)	905	50.0	mg/kg	1000	18.9	88.6	70-130	1.57	35	
Surrogate: o-Terphenyl	46		"	50.0		91.1	50-150			

Origins Laboratory, Inc.



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4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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
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Classical Chemistry Parameters - 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 B9E3103 - NO PREP

Duplicate (B9E3103-DUP1)

Source: Y905440-01

Prepared: 05/31/2019 Analyzed: 05/31/2019

pH	8.22		pH Units		8.20			0.244	25	
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Batch B9E3104 - NO PREP

Blank (B9E3104-BLK1)

Prepared: 05/31/2019 Analyzed: 05/31/2019

Specific Conductance (EC)	0.00320	0.00500	mmhos/cm							
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Duplicate (B9E3104-DUP1)

Source: Y905440-01

Prepared: 05/31/2019 Analyzed: 05/31/2019

Specific Conductance (EC)	0.113	0.00503	mmhos/cm		0.108			4.89	25	
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Eagle Environmental Consulting, Inc.

4101 Inca Street

Denver CO 80211

Martin C Eckert III

Project Number: [none]

Project: Noble - Maury O #13-3,6

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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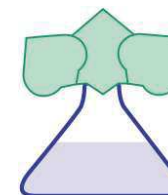
Jen Pellegrini, Project Manager

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

DATE RECEIVED: 06/03/2019

DATE REPORTED: 06/04/2019

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
2616138	Y905455	01	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
2616138																	

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	lbs/A		
2616138	2.92	1.24	0.50	0.35	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
2616138	Y905455	01								lbs/A						

Analysis By: American Agricultural Lab

Recommendations By: American Agricultural Lab



Your Lab's letterhead here...

Address

City, St. Zip

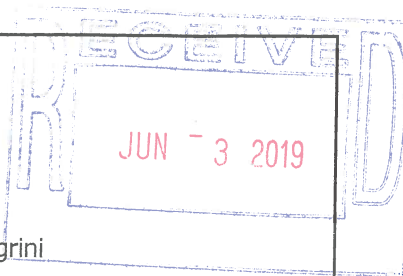
Phone/Fax

SUBCONTRACT ORDER

Sending Laboratory:

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

Project Manager: Jen Pellegrini



Subcontracted Laboratory:

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

Work Order: Y905455

Analysis	Due	Expires	Comments
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Sample ID: Y905455-01 *Soil* **Sampled: 05/30/2019 10:35**

SAR (Saturated Paste Prep) 06/07/2019 05/31/2019 10:35

Containers Supplied:

Released By

Date

Received By

Date