

# Wellhead Closure Checklist

## COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure <b>2-9-23</b>	Partially Buried Vault Closure
Site Name & COGCC Facility Number: <b>Ocoma # C91-260</b>		Date: <b>2-9-23</b>					Remediation Project #: <b>25406</b>
Associated Wells: <b>05-123-34558</b>		Age of Site: <b>YEARS</b>					Number of Photos Attached: <b>2</b>
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)						Estimated Facility Size (acres):	
Location: <b>40.265110, -104.597400</b>							
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) <b>GOOD</b>							
USCS Soil Type: <b>SW</b>				Estimated Depth to Groundwater: <b>&gt; 20'</b>			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>NONE OBSERVED</b>							
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>NONE OBSERVED</b>							
<b>Wellhead(s)</b>							
Well API	<b>05-123-34558</b>						
Age	<b>YEARS</b>						
Condition of surface around wellhead	<b>GOOD - PER CREW</b>						
PID Readings	<b>N/A - EXCAVATED UPON ARRIVAL</b>						
Condition of subsurface (if lab data present)	<b>GOOD</b>						
PID Readings	<b>2.5</b>	<b>0.5</b>	<b>2.0</b>	<b>2.2</b>	<b>2.8</b>		
Sample taken? Location/Sample ID	<b>WH-SS-01</b>	<b>WH-SS-02</b>	<b>WH-SS-03</b>	<b>WH-SS-04</b>	<b>WH-FS-01</b>		
Photo Number(s)	<b>SEE PHOTOLG</b>						
Other observations regarding wellheads: <b>WELL CASING CUT/CAPPED FOLLOWING ASSESSMENT.</b>							
<b>Summary</b>							
Was impacted soil identified? <input checked="" type="radio"/> No      Yes - less than 10 cubic yards      Yes - more than 10 cubic yards							
Total number of samples field screened: <b>5</b>				Total number of samples collected: <b>5</b>			
Highest PID Reading: <b>2.8</b>				Total number of samples submitted to lab for analysis: <b>1</b>			
If more than 10 cubic yards of impacted soil were observed:							
Vertical extent: <b>N/A</b>				Estimated spill volume:			
Lateral extent:				Volume of soil removed:			
Is additional investigation required?							
Was groundwater encountered during the investigation? <input checked="" type="radio"/> No      Yes - not impacted or in contact with impacted soils      Yes - groundwater impacted and/or in contact with impacted soils							
Measured depth to groundwater:				Was remedial groundwater removal conducted?      Yes      No			
Date Groundwater was encountered:				Commencement date of removal:			
Seen on groundwater?      Yes      No				Volume of groundwater removed prior to sampling:			
Free product observed?      Yes      No				Volume of groundwater removed post sampling:			
Total number of samples collected:				Total Volume of groundwater removed:			
Total number of samples submitted to lab for analysis:							

# Flowline Closure Checklist

## COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional Attachments:		Tank Battery Closure		Wellhead Closure	2-9-23	Pit Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: OCOMA # C31-20D		Date:		2-9-23		Remediation Project #:		25406	
Associated Wells: 05-123-84555		Age of Site:		YEARS		Number of Photos Attached:		1	
Starting point: (GPS coordinates and descriptions) NO. 265700, -104.597409 AT WELL									
End point: (GPS coordinates and descriptions) NO. 262189, -104.598020 AT SEPARATOR									
USCS Soil Type: SW					Estimated Depth to Groundwater: 720'				
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
NONE OBSERVED									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
NONE OBSERVED									
<b>Flowlines</b>									
Flowline type	Q. G. W								
Depth	~4'								
Age	YEARS								
Length	~1165'								
Construction Material	STEEL								
Were flowlines pulled?	NO - ABANDONED IN PLACE								
Visual Integrity of lines	GOOD - PER INTEGRITY TEST								
Visual impacts if trenched	NA								
PID Readings if trenched	1.8								
Sample taken? Location/Sample ID#	FL-S8-01								
Photo Number(s)	SEE PHOTOLOG								
Other observations regarding on location flowlines:									
FLOWLINE ABANDONED IN PLACE. PT B (QSEP) ASSESSED.									
<b>Summary</b>									
Was impacted soil identified?									
<input checked="" type="radio"/> No      Yes - less than 10 cubic yards      Yes - more than 10 cubic yards									
Total number of samples field screened: 1					Total number of samples collected: 1				
Highest PID Reading: 1.8					Total number of samples submitted to lab for analysis: 1				
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent: N/A					Estimated spill volume:				
Lateral extent: N/A					Volume of soil removed:				
Is additional investigation required?									
Was groundwater encountered during the investigation?									
<input checked="" type="radio"/> No      Yes - not impacted or in contact with impacted soils      Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes      No				
Date Groundwater was encountered:					Commencement date of removal:				
Sheen on groundwater? Yes      No					Volume of groundwater removed prior to sampling:				
Free product observed? Yes      No					Volume of groundwater removed post sampling:				
Total number of samples collected:					Total Volume of groundwater removed:				
Total number of samples submitted to lab for analysis:									



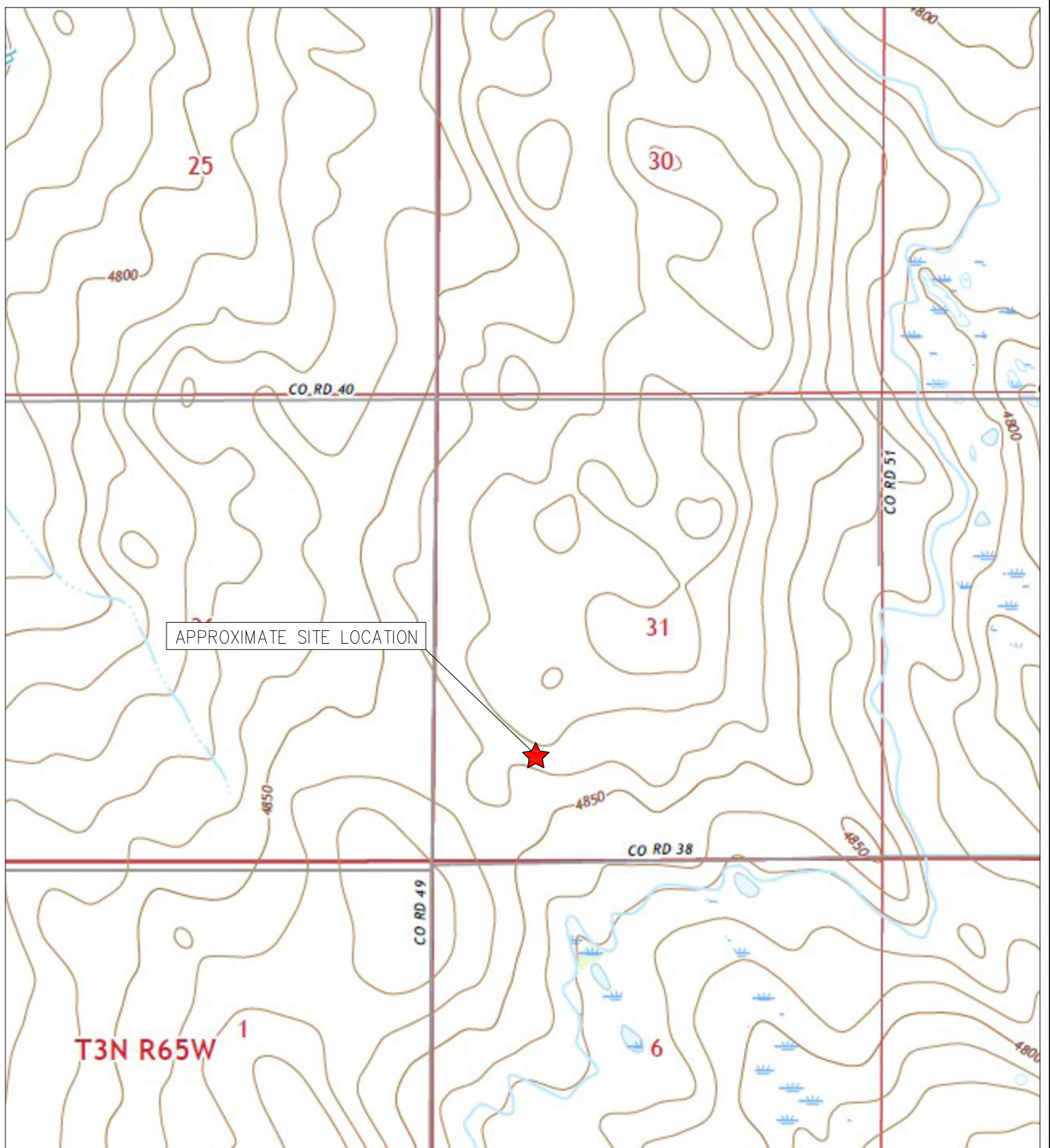
## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**

**Figure 4: Polycyclic Aromatic Hydrocarbons Map**



TOPOGRAPHIC SITE LOCATION MAP  
 OCOMA #C31-20D  
 CLOSURE ASSESSMENT  
 40.265110 / -104.597400  
 SE¼ SW¼ SEC.31 T4N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-34558  
 REMEDIATION # 25406



**EAGLE**  
 ENVIRONMENTAL  
 CONSULTING, LLC

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




SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,  
 VALLEY VIEW SCHOOL, CO QUADRANGLE 2022

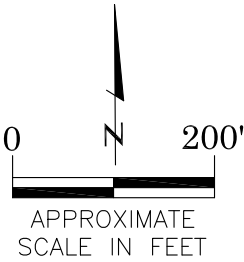
FIGURE 1





LEGEND

-  FORMER OCOMA #C31-20D WELLHEAD (PLUGGED AND ABANDONED)
-  ASSOCIATED SEPARATOR
-  APPROXIMATE FLOWLINE LOCATION (ABANDONED IN PLACE)



AERIAL SITE LOCATION MAP  
OCOMA #C31-20D  
CLOSURE ASSESSMENT  
40.265110 / -104.597400  
SE¼ SW¼ SEC.31 T4N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-34558  
REMEDIATION # 25406

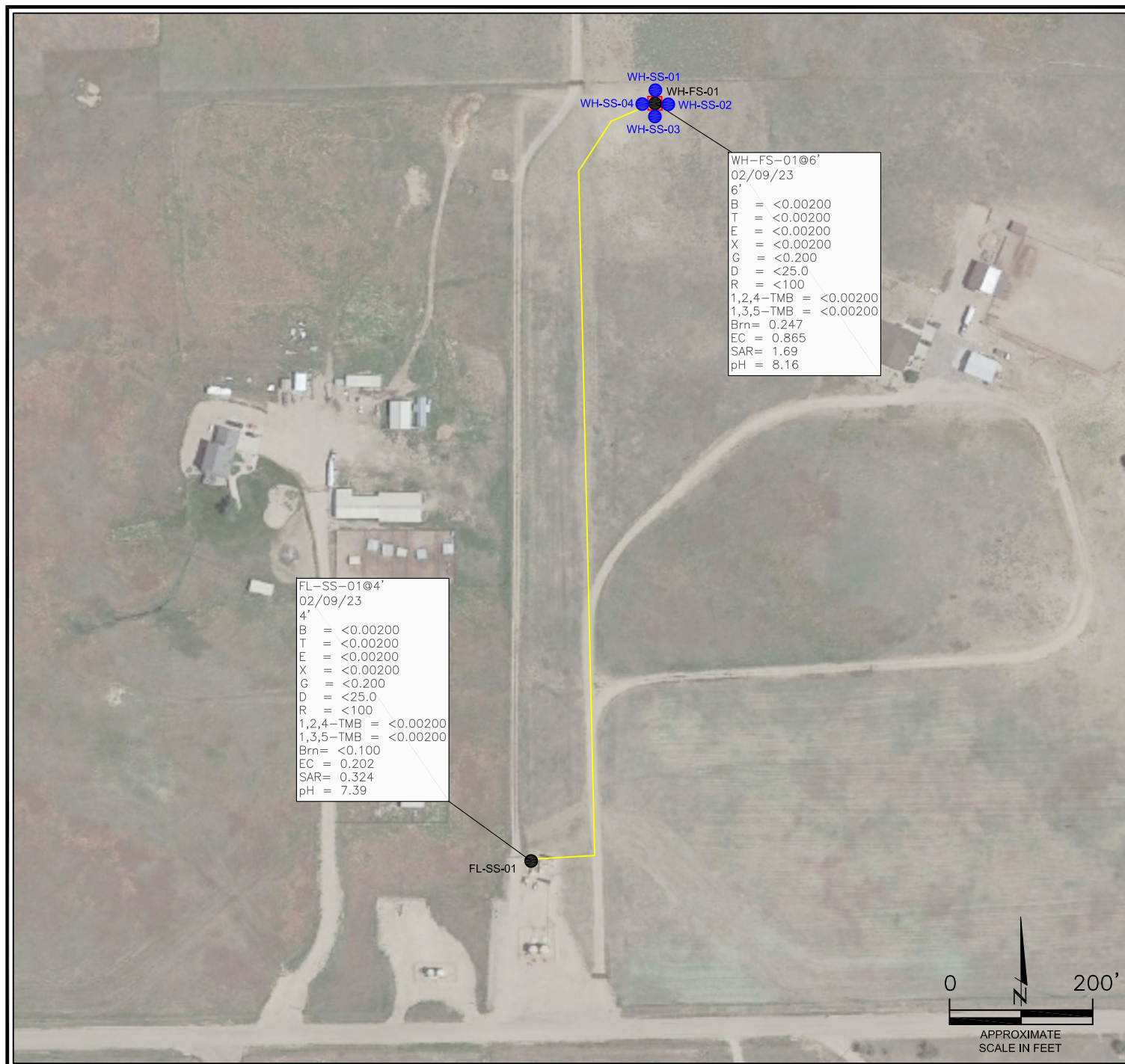
FIGURE NO.  
2

DRAWN BY:  
IM



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





#### LEGEND

- WELLHEAD ASSESSMENT BOUNDARIES
- APPROXIMATE FLOWLINE LOCATION (ABANDONED IN PLACE)
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

#### PARAMETERS

**SAMPLE LOCATION**  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)  
R = TPH-RRO (mg/kg)  
1,2,4-TMB = 1,2,4 TRIMETHYLBENZENE (mg/kg)  
1,3,5-TMB = 1,3,5 TRIMETHYLBENZENE (mg/kg)  
Brn = BORON (mg/L)  
EC = SPECIFIC CONDUCTANCE (mmhos/cm)  
SAR = SODIUM ADSORPTION RATIO  
pH = pH (pH UNITS)

mg/kg = MILLIGRAMS PER KILOGRAM  
mg/L = MILLIGRAMS PER LITER  
mmhos/cm = MILLIMHOS PER CENTIMETER

TPH-GRO = TOTAL PETROLEUM HYDROCARBONS - GASOLINE RANGE ORGANICS  
TPH-DRO = TOTAL PETROLEUM HYDROCARBONS - DIESEL RANGE ORGANICS  
TPH-RRO = TOTAL PETROLEUM HYDROCARBONS - RESIDUAL RANGE ORGANICS

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

VALUES PRESENTED IN **BOLD** EXCEED COGCC TABLE 915-1 REGULATORY LIMITS.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

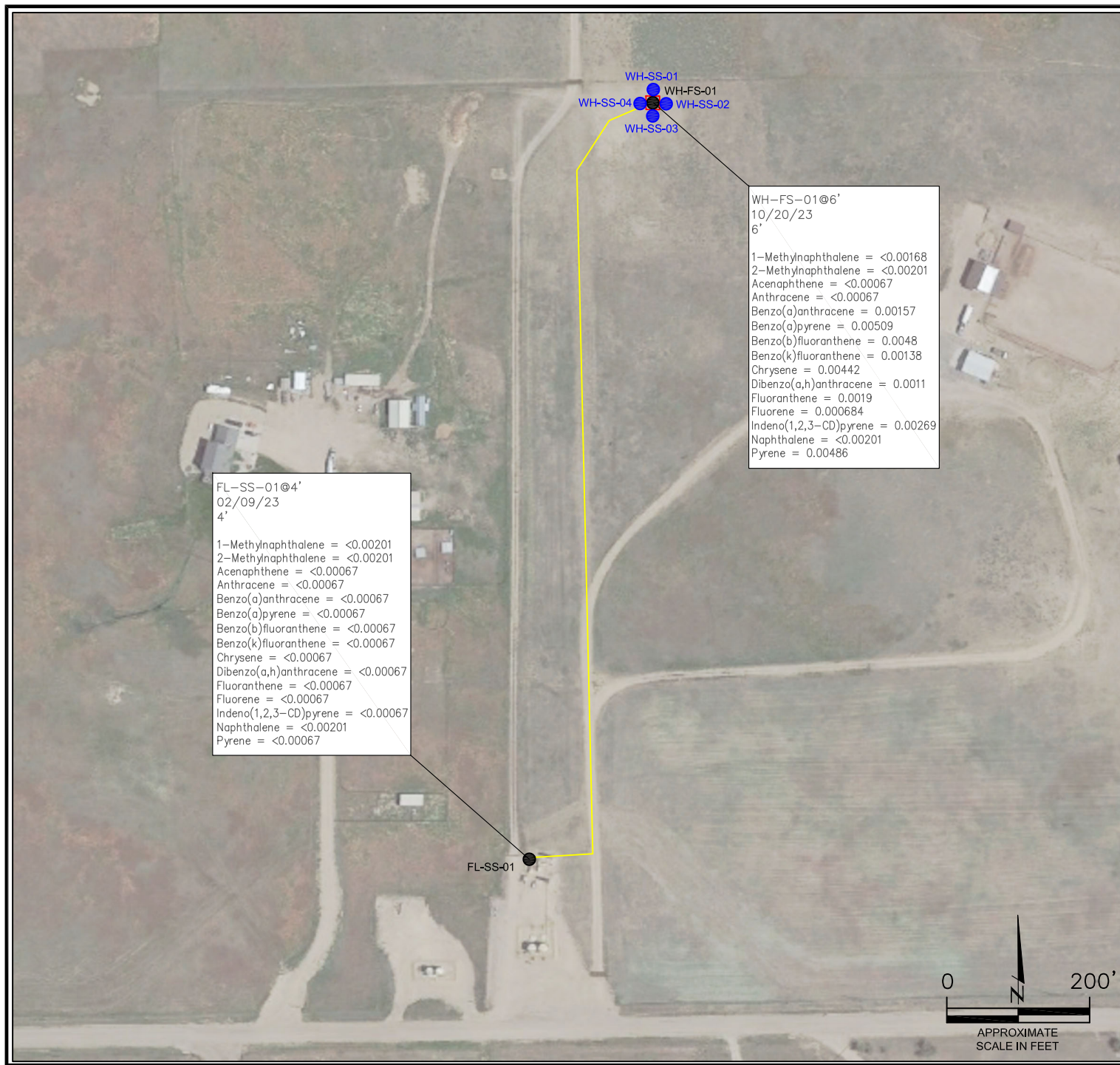
**SOIL ANALYTICAL MAP**  
OCOMA #C31-20D  
CLOSURE ASSESSMENT  
40.265110 / -104.597400  
SE¼ SW¼ SEC.31 T4N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-34558  
REMEDIATION # 25406

FIGURE NO.  
3

DRAWN BY:  
IM



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



#### LEGEND

- WELLHEAD ASSESSMENT BOUNDARIES
- APPROXIMATE FLOWLINE LOCATION (ABANDONED IN PLACE)
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

#### PARAMETERS

SAMPLE LOCATION  
DATE SAMPLE COLLECTED  
APPROXIMATE DEPTH

POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM

#### NOTES:

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

VALUES PRESENTED IN **BOLD** EXCEED COGCC TABLE 915-1 REGULATORY LIMITS.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

#### POLYCYCLIC AROMATIC HYDROCARBONS MAP

OCOMA #C31-20D  
CLOSURE ASSESSMENT  
40.265110 / -104.597400  
SE¼ SW¼ SEC.31 T4N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-34558  
REMEDATION # 25406

FIGURE NO.  
4

DRAWN BY:  
IM



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



## **TABLES**

**Table 1: Photoionization Detector Reading Summary**

**Table 2: Soil Analytical Results Summary**



**TABLE 1**  
**PHOTOIONIZATION DETECTOR READING SUMMARY**  
**OCOMA #C31-20D**  
**CLOSURE ASSESSMENT**  
**40.265110 / -104.597400**  
**SE¼ SW¼ SEC.31 T4N R64W 6PM**  
**WELD COUNTY, COLORADO**  
**API # 05-123-34558**  
**REMEDATION # 25406**

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.265124 / -104.597419)	02/09/23	5	2.5	N
WH-SS-02 @ 5' (40.265110 / -104.597400)	02/09/23	5	0.5	N
WH-SS-03 @ 5' (40.265092 / -104.597419)	02/09/23	5	2.0	N
WH-SS-04 @ 5' (40.265109 / -104.597441)	02/09/23	5	2.2	N
WH-FS-01 @ 6' (40.265108 / -104.597420)	02/09/23	6	2.8	Y
FL-SS-01 @ 4' (40.262185 / -104.598020)	02/09/23	4	1.8	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				



**EAGLE**  
 ENVIRONMENTAL  
 CONSULTING, LLC

TABLE 2  
SOIL ANALYTICAL RESULTS SUMMARY  
OCOMA #C31-20D  
CLOSURE ASSESSMENT  
40.265110 / -104.597400  
SE¼ SW¼ SEC.31 T4N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-34558  
REMEDIATION # 25406

Sample Location		WH-FS-01 @ 6'		FL-SS-01 @ 4'	
(Latitude / Longitude)		(40.265108 / -104.597420)		(40.262185 / -104.598020)	
Sample Date		2/9/2023		2/9/2023	
Sample Depth		6'		4'	
PID Reading (ppm-v)		2.8		1.8	
Regulatory Limits					
Chemical of Concern	Units	COGCC Table 915-1 RSSLs	COGCC Table 915-1 GSSLs		
VOCs					
Benzene	mg/kg	1.2	0.0026	<0.00200	<0.00200
Toluene	mg/kg	490	0.69	<0.00200	<0.00200
Ethylbenzene	mg/kg	5.8	0.78	<0.00200	<0.00200
Total Xylenes	mg/kg	58	9.9	<0.00200	<0.00200
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	<0.00200	<0.00200
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	<0.00200	<0.00200
TOTAL PETROLEUM HYDROCARBONS					
TPH-GRO	mg/kg	500	--	<0.200	<0.200
TPH-DRO	mg/kg	500	--	<25.0	<25.0
TPH-RRO	mg/kg	500	--	<100	<100
POLYCYCLIC AROMATIC HYDROCARBONS					
1-Methyl-naphthalene	mg/kg	18	0.006	0.00168	<0.00201
2-Methyl-naphthalene	mg/kg	24	0.019	<0.00201	<0.00201
Acenaphthene	mg/kg	360	0.55	<0.00067	<0.00067
Anthracene	mg/kg	1800	5.8	<0.00067	<0.00067
Benzo(a)-anthracene	mg/kg	1.1	0.011	0.00157	<0.00067
Benzo(a)-pyrene	mg/kg	0.11	0.24	0.00509	<0.00067
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	0.0048	<0.00067
Benzo(k)-fluoranthene	mg/kg	11	2.9	0.00138	<0.00067
Chrysene	mg/kg	110	9	0.00442	<0.00067
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	0.0011	<0.00067
Fluoranthene	mg/kg	240	8.9	0.0019	<0.00067
Fluorene	mg/kg	240	0.54	0.000684	<0.00067
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	0.00269	<0.00067
Naphthalene	mg/kg	2	0.0038	<0.00201	<0.00201
Pyrene	mg/kg	180	1.3	0.00486	<0.00067
SOIL SUITABILITY (Inorganics)					
Boron	mg/L	2	--	0.247	<0.100
pH	standard unit	6-8.3	--	8.16	7.39
Sodium Adsorption Ratio (SAR)	--	<6	--	1.69	0.324
Specific Conductance (EC)	mmhos/cm	<4	--	0.865	0.202

COGCC = Colorado Oil and Gas Conservation Commission

mg/kg = milligrams per kilogram

mmhos/cm = millimhos per centimeter

PID = Photoionization Detector

ppm-v = parts per million by volume

mg/L = milligrams per liter

SAR = Sodium Adsorption Ratio

Notes:

Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit.

Values presented in **BOLD** exceed COGCC Table 915-1 Regulatory Limits.

VOCs - Volatile Organic Compounds

RSSLs = Residential Soil Screening Levels

GSSLs = Protection of Groundwater Soil Screening Levels

TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics

TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics

TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics



## **ATTACHMENT A**

### **Photo Log**



Ocoma #C31-20D  
API # 05-123-34558  
Remediation # 25406

Closure Assessment

February 2023





# Wellhead Excavation – 02/09/23



Looking south  
No petroleum hydrocarbon staining or odor observed



Looking east  
No petroleum hydrocarbon staining or odor observed



# Flowline Assessment – 02/09/23



Looking south at flowline Pt B/terminus at separator  
No petroleum hydrocarbon staining or odor observed





## **ATTACHMENT B**

### **Laboratory Analytical Report**



February 16, 2023

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Ocoma #C31-20D

Project Number - [none]

Attached are your analytical results for Noble - Ocoma #C31-20D received by Origins Laboratory, Inc. February 09, 2023. This project is associated with Origins project number Y302176-01.

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: [none]

Project: Noble - Ocoma #C31-20D

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-FS-01@6'	Y302176-01	Soil	February 9, 2023 8:02	02/09/2023 14:36
FL-SS-01@4'	Y302176-02	Soil	February 9, 2023 12:10	02/09/2023 14:36

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: [none]  
Project: Noble - Ocoma #C31-20D

www.originslaboratory.com

U302176 page 1 of 1

ORIGINS  
LABORATORY, INC

Client: Eagle Environmental Consulting  
Address: 8000 W 44th Ave  
Wheat Ridge, CO 80033  
Telephone Number: 303-433-0479  
Email Address: mce@eagle-enviro.com

Project Manager: Martin Eckert III  
Project Name: Ocoma #C31-20D  
Project Number: 1  
Samples Collected By: JM

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 #	Other	GC/MS (MSB)	GC/MS (MSB)	GC/MS (MSB)	
WHT-FS-01-06	2/9/23	0802	2	X									X	X	FL/SAL/pH =
FL-S-01-04	2/9/23	1210	2	X									X	X	surround gas/pH page 2
															3
															4
															5
															6
															7
															8
															9
															10

Relinquished By: [Signature] Date: 2/9/23 Time: 1436  
Relinquished By: [Signature] Date: 2/9/23 Time: 1436

Received By: [Signature] Date: 2/9/23 Time: 1436  
Received By: [Signature] Date: 2/9/23 Time: 1436

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

Noble

Date Results Needed

Temp Received- 3.5

Bill to [Signature]

Origins Laboratory, Inc.

[Signature]

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: [none]

Project: Noble - Ocoma #C31-20D

Origins Laboratory

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

### Sample Receipt Checklist

Origins Work Order: 4302176

Client: Eagle

Client Project ID: Ocoma #C31-20D

Checklist Completed by: EHS/DE

Shipped Via: HD

Date/time completed: 2/19/23

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

Airbill #: NA

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

Cooler Number/Temperature: 1 13.5 °C      /      °C      /      °C (Describe)

Thermometer ID: T004

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> ?	<u>X</u>			
Is there ice present (document if blue ice is used)	<u>X</u>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<u>X</u>		
Were all samples received intact <sup>(1)</sup> ?	<u>X</u>			
Was adequate sample volume provided <sup>(1)</sup> ?	<u>X</u>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<u>X</u>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<u>X</u>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<u>X</u>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<u>X</u>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<u>X</u>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			<u>X</u>	
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)			<u>X</u>	
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) [Signature]

Date/Time Reviewed 2/10/23

Origins Laboratory, Inc.

[Signature]

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: [none]  
Project: Noble - Ocoma #C31-20D

WH-FS-01@6'

2/9/2023 8:02:00AM

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

Origins Laboratory, Inc.  
Y302176-01 (Soil)

## Boron (DTPA Sorbitol)

Boron	0.247	0.0999	mg/L	1	B3B1002	02/10/2023	02/13/2023	
-------	-------	--------	------	---	---------	------------	------------	--

## DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3B1001	02/10/2023	02/10/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	92.7 %	50-150	"	"	"	"	"
------------------------	--------	--------	---	---	---	---	---

## GBTEX+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3B1025	02/10/2023	02/11/2023	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	96.9 %	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: [none]  
Project: Noble - Ocoma #C31-20D

WH-FS-01@6'

2/9/2023 8:02:00AM

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

Origins Laboratory, Inc.  
Y302176-01 (Soil)

## GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.1 %	70-130	B3B10 25	02/10/2023	02/11/2023
Surrogate: 4-Bromofluorobenzene	99.5 %	70-130	"	"	"

## Metals by Saturated Paste by EPA 6010

Calcium	1.96	0.499	meq/L	10	[CALC]	02/10/2023	02/13/2023
Magnesium	0.667	0.823	"	"	"	"	"
Sodium	1.94	0.435	"	"	"	"	"

## PAH by 8270D SIM

1-Methylnaphthalene	0.00168	0.00109	0.00201	mg/Kg	1	L663761	02/14/2023	02/14/2023	J
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	0.00157	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.00509	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	0.0048	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	0.00138	0.000437	0.00067	"	"	"	"	"	
Chrysene	0.00442	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	0.0011	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.0019	0.000394	0.00067	"	"	"	"	"	
Fluorene	0.000684	0.000286	0.00067	"	"	"	"	"	

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: [none]  
Project: Noble - Ocoma #C31-20D

WH-FS-01@6'

2/9/2023 8:02:00AM

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

Waypoint Analytical, LLC.  
Y302176-01 (Soil)

## PAH by 8270D SIM

Indeno(1,2,3-cd)pyrene	0.00269	0.000627	0.00067	mg/Kg	1	L663761	02/14/2023	02/14/2023	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	0.00486	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	58.8 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	50.8 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	62.8 %		29-110			"	"	"	

## pH in Soil by 9045D

pH	8.16			pH Units	1	B3B1006	02/10/2023	02/11/2023	
----	------	--	--	----------	---	---------	------------	------------	--

## SAR by 20B Saturated Paste

SAR	1.69			SAR	1	B3B1003	02/10/2023	02/13/2023	
-----	------	--	--	-----	---	---------	------------	------------	--

## Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.865		0.00500	mmhos/cm	1	B3B1006	02/10/2023	02/11/2023	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

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: [none]  
Project: Noble - Ocoma #C31-20D

FL-SS-01@4'  
2/9/2023 12:10:00PM

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

**Origins Laboratory, Inc.**  
**Y302176-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND	0.100	mg/L	1	B3B1002	02/10/2023	02/13/2023	
-------	----	-------	------	---	---------	------------	------------	--

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND	25.0	mg/kg	1	B3B1001	02/10/2023	02/10/2023	U
Residual Range Organics (C28-C40)	ND	100	"	"	"	"	"	U

Surrogate: o-Terphenyl	96.2 %	50-150			"	"	"	
------------------------	--------	--------	--	--	---	---	---	--

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B3B1025	02/10/2023	02/11/2023	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	"	"	U
Benzene	ND	0.00200	"	"	"	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	"	"	U
Toluene	ND	0.00200	"	"	"	"	"	U
Xylenes, total	ND	0.00200	"	"	"	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	"	"	U

Surrogate: 1,2-Dichloroethane-d4	97.2 %	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: [none]  
Project: Noble - Ocoma #C31-20D

FL-SS-01@4'  
2/9/2023 12:10:00PM

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

Origins Laboratory, Inc.  
Y302176-02 (Soil)

## GBTEX+TMBs by 8260D

Surrogate: Toluene-d8	95.3 %	70-130	B3B10 25	02/10/2023	02/11/2023
Surrogate: 4-Bromofluorobenzene	98.7 %	70-130	"	"	"

## Metals by Saturated Paste by EPA 6010

Calcium	1.50	0.499	meq/L	10	[CALC]	02/10/2023	02/13/2023
Magnesium	ND	0.823	"	"	"	"	"
Sodium	ND	0.435	"	"	"	"	"

## PAH by 8270D SIM

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L663761	02/14/2023	02/14/2023
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"
Anthracene	ND	0.000334	0.00067	"	"	"	"	"
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"
Benzo(a)pyrene	ND	0.000468	0.00067	"	"	"	"	"
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"
Chrysene	ND	0.000624	0.00067	"	"	"	"	"
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"

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: [none]  
Project: Noble - Ocoma #C31-20D

FL-SS-01@4'  
2/9/2023 12:10:00PM

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

Waypoint Analytical, LLC.  
Y302176-02 (Soil)

## PAH by 8270D SIM

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L663761	02/14/2023	02/14/2023
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"
Pyrene	ND	0.000643	0.00067	"	"	"	"	"

Surrogate: 2-Fluorobiphenyl	53.9 %	33-115	"	"	"
Surrogate: 4-Terphenyl-d14	56.6 %	33-122	"	"	"
Surrogate: Nitrobenzene-d5	54.5 %	29-110	"	"	"

## pH in Soil by 9045D

pH	7.39	pH Units	1	B3B1006	02/10/2023	02/11/2023
----	------	----------	---	---------	------------	------------

## SAR by 20B Saturated Paste

SAR	0.324	SAR	1	B3B1003	02/10/2023	02/13/2023
-----	-------	-----	---	---------	------------	------------

## Specific Conductance Mod. 9050A

Specific Conductance (EC)	0.202	0.00500	mmhos/cm	1	B3B1006	02/10/2023	02/11/2023
---------------------------	-------	---------	----------	---	---------	------------	------------

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: [none]  
Project: Noble - Ocoma #C31-20D

## 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 B3B1001 - EPA 3580										
Blank (B3B1001-BLK1)					Prepared: 02/10/2023 Analyzed: 02/10/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	24		"	24.9		95.9	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: [none]  
Project: Noble - Ocoma #C31-20D

## 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 B3B1001 - EPA 3580

### LCS (B3B1001-BS1)

Prepared: 02/10/2023 Analyzed: 02/10/2023

Diesel (C10-C28)	976	50.0	mg/kg	1000		97.6	70-130			
Residual Range Organics (C28-C40)	950	200	"	1000		95.0	70-130			
Surrogate: o-Terphenyl	48		"	49.8		95.8	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.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Ocoma #C31-20D

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 B3B1001 - EPA 3580

Matrix Spike (B3B1001-MS1)		Source: Y302174-01			Prepared: 02/10/2023 Analyzed: 02/10/2023					
Diesel (C10-C28)	1030	50.0	mg/kg	1000	ND	103	70-130			
Residual Range Organics (C28-C40)	985	200	"	1000	ND	98.5	70-130			
Surrogate: o-Terphenyl	56		"	49.8		113	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: [none]  
Project: Noble - Ocoma #C31-20D

## 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 B3B1001 - EPA 3580										
Matrix Spike Dup (B3B1001-MSD1)		Source: Y302174-01			Prepared: 02/10/2023 Analyzed: 02/10/2023					
Diesel (C10-C28)	1000	50.0	mg/kg	1000	ND	100	70-130	2.71	35	
Residual Range Organics (C28-C40)	943	200	"	1000	ND	94.3	70-130	4.38	35	
Surrogate: o-Terphenyl	46		"	49.8		92.4	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: [none]  
Project: Noble - Ocoma #C31-20D

## 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 B3B1025 - EPA 5030 (soil)										
Blank (B3B1025-BLK1)					Prepared: 02/10/2023 Analyzed: 02/11/2023					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
1,3,5-Trimethylbenzene	ND	0.00200	"							U
Benzene	ND	0.00200	"							U
Ethylbenzene	ND	0.00200	"							U
Naphthalene	ND	0.00380	"							U
Toluene	ND	0.00200	"							U
Xylenes, total	ND	0.00200	"							U
Gasoline Range Hydrocarbons	ND	0.200	"							U
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		92.1	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.0	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.8	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: [none]  
Project: Noble - Ocoma #C31-20D

## 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 B3B1025 - EPA 5030 (soil)

#### LCS (B3B1025-BS1)

Prepared: 02/10/2023 Analyzed: 02/11/2023

1,2,4-Trimethylbenzene	0.0959	0.00200	mg/kg	0.100		95.9	70-130			
1,3,5-Trimethylbenzene	0.0945	0.00200	"	0.100		94.5	70-130			
Benzene	0.0910	0.00200	"	0.100		91.0	70-130			
Ethylbenzene	0.0930	0.00200	"	0.100		93.0	70-130			
Naphthalene	0.105	0.00380	"	0.100		105	70-130			
Toluene	0.0864	0.00200	"	0.100		86.4	70-130			
o-Xylene	0.0979	0.00200	"	0.100		97.9	70-130			
m,p-Xylene	0.197	0.00400	"	0.200		98.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		99.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		92.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.3	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: [none]  
Project: Noble - Ocoma #C31-20D

**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 B3B1025 - EPA 5030 (soil)**

Matrix Spike (B3B1025-MS1)		Source: Y302222-01			Prepared: 02/10/2023 Analyzed: 02/11/2023					
1,2,4-Trimethylbenzene	0.105	0.00200	mg/kg	0.100	ND	105	70-130			
1,3,5-Trimethylbenzene	0.105	0.00200	"	0.100	ND	105	70-130			
Benzene	0.0969	0.00200	"	0.100	ND	96.9	70-130			
Ethylbenzene	0.108	0.00200	"	0.100	ND	108	70-130			
Naphthalene	0.0866	0.00380	"	0.100	0.00148	85.1	70-130			
Toluene	0.0940	0.00200	"	0.100	0.000520	93.5	70-130			
o-Xylene	0.111	0.00200	"	0.100	0.00184	110	70-130			
m,p-Xylene	0.228	0.00400	"	0.200	0.000720	114	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		90.0	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		94.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.6	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: [none]  
Project: Noble - Ocoma #C31-20D

## 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 B3B1025 - EPA 5030 (soil)										
Matrix Spike Dup (B3B1025-MSD1)			Source: Y302222-01		Prepared: 02/10/2023 Analyzed: 02/11/2023					
1,2,4-Trimethylbenzene	0.0892	0.00200	mg/kg	0.100	ND	89.2	70-130	15.9	20	
1,3,5-Trimethylbenzene	0.0874	0.00200	"	0.100	ND	87.4	70-130	18.3	20	
Benzene	0.0911	0.00200	"	0.100	ND	91.1	70-130	6.15	20	
Ethylbenzene	0.0905	0.00200	"	0.100	ND	90.5	70-130	17.4	20	
Naphthalene	0.0868	0.00380	"	0.100	0.00148	85.3	70-130	0.254	20	
Toluene	0.0846	0.00200	"	0.100	0.000520	84.1	70-130	10.5	20	
o-Xylene	0.0947	0.00200	"	0.100	0.00184	92.9	70-130	16.3	20	
m,p-Xylene	0.191	0.00400	"	0.200	0.000720	94.9	70-130	18.0	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		100	70-130			
Surrogate: Toluene-d8	0.11		"	0.125		90.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.2	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: [none]  
Project: Noble - Ocoma #C31-20D

## 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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

## 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 B3B1002 - DTPA Sorbitol Preparation

##### Blank (B3B1002-BLK1)

Prepared: 02/10/2023 Analyzed: 02/13/2023

Boron ND 0.100 mg/L

##### Duplicate (B3B1002-DUP1)

Source: Y302174-01

Prepared: 02/10/2023 Analyzed: 02/13/2023

Boron 0.128 0.100 mg/L 0.115 10.7 50

#### Batch B3B1003 - Saturated Paste Metals

##### Blank (B3B1003-BLK1)

Prepared: 02/10/2023 Analyzed: 02/13/2023

Calcium PPM ND 10.0 mg/L

SAR 0.00 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

##### Duplicate (B3B1003-DUP1)

Source: Y302151-01

Prepared: 02/10/2023 Analyzed: 02/13/2023

SAR 0.00 SAR 7.45 200 200

Calcium PPM 5.03 10.0 mg/L 4.40 13.5 50

Magnesium PPM 4.08 10.0 " 3.66 10.9 50

Sodium PPM 97.3 10.0 " 87.4 10.7 50

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: [none]  
Project: Noble - Ocoma #C31-20D

## Saturated Paste - Quality Control Origins Laboratory, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B3B1006 - Saturated Paste pH/EC</b>										
<b>Blank (B3B1006-BLK1)</b>					Prepared: 02/10/2023 Analyzed: 02/11/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
<b>Duplicate (B3B1006-DUP1)</b>					<b>Source: Y302151-01</b> Prepared: 02/10/2023 Analyzed: 02/11/2023					
Specific Conductance (EC)	0.346	0.00500	mmhos/cm		0.300			14.3	25	
pH	8.71		pH Units		8.71			0.00	25	

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: [none]  
Project: Noble - Ocoma #C31-20D

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, LLC.**

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

**Batch L663761 - 3550B**

MSD (L 86007-MSD-L663761)		Source: Y302176-02			Prepared: 02/14/2023 Analyzed: 02/14/2023					
2-Methylnaphthalene	0.0978	0.00201	mg/Kg	0.165	<0.00194	59.2	30-130	13	30	
Fluorene	0.113	0.00067	"	0.165	<0.000286	68.4	30-130	11.2	30	
Pyrene	0.11	0.00067	"	0.165	<0.000643	66.6	30-130	13	30	
Indeno(1,2,3-cd)pyrene	0.0602	0.00067	"	0.165	<0.000627	36.4	30-130	3.8	30	
Fluoranthene	0.117	0.00067	"	0.165	<0.000394	70.9	30-130	13.6	30	
Dibenz(a,h)anthracene	0.0857	0.00067	"	0.165	<0.000614	51.9	30-130	4.1	30	
Chrysene	0.109	0.00067	"	0.165	<0.000624	66	30-130	7.6	30	
Naphthalene	0.0962	0.00201	"	0.165	<0.00145	58.3	30-130	13.8	30	
1-Methylnaphthalene	0.101	0.00201	"	0.165	<0.00109	61.2	30-130	17.5	30	
Benzo(k)fluoranthene	0.0749	0.00067	"	0.165	<0.000437	45.3	30-130	5.3	30	
Acenaphthene	0.107	0.00067	"	0.165	<0.000304	64.8	30-130	12.3	30	
Anthracene	0.119	0.00067	"	0.165	<0.000334	72.1	30-130	15.3	30	
Benzo(a)anthracene	0.114	0.00067	"	0.165	<0.000493	69	30-130	11.1	30	
Benzo(a)pyrene	0.11	0.00067	"	0.165	<0.000468	66.6	30-130	11.3	30	
Benzo(b)fluoranthene	0.0874	0.00067	"	0.165	<0.000585	52.9	30-130	11.3	30	
Surrogate: 2-Fluorobiphenyl	53.9		"	0.33	179	53.9	33-115			
Surrogate: Nitrobenzene-d5	56.3		"	0.33	181	56.3	29-110			
Surrogate: 4-Terphenyl-d14	60.9		"	0.33	188	60.9	33-122			

MS (L 86007-MS-L663761)		Source: Y302176-02			Prepared: 02/14/2023 Analyzed: 02/14/2023					
Benzo(k)fluoranthene	0.071	0.00067	mg/Kg	0.164	<0.000437	43.2	30-130			
Acenaphthene	0.0946	0.00067	"	0.164	<0.000304	57.6	30-130			
Naphthalene	0.0837	0.00201	"	0.164	<0.00145	51	30-130			
Indeno(1,2,3-cd)pyrene	0.0579	0.00067	"	0.164	<0.000627	35.3	30-130			
Fluorene	0.101	0.00067	"	0.164	<0.000286	61.5	30-130			
Fluoranthene	0.102	0.00067	"	0.164	<0.000394	62.1	30-130			
Dibenz(a,h)anthracene	0.0822	0.00067	"	0.164	<0.000614	50.1	30-130			

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: [none]  
Project: Noble - Ocoma #C31-20D

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, LLC.**

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

**Batch L663761 - 3550B**

MS (L 86007-MS-L663761)		Source: Y302176-02			Prepared: 02/14/2023 Analyzed: 02/14/2023					
Chrysene	0.101	0.00067	mg/Kg	0.164	<0.000624	61.5	30-130			
1-Methylnaphthalene	0.0847	0.00201	"	0.164	<0.00109	51.6	30-130			
Benzo(a)pyrene	0.0982	0.00067	"	0.164	<0.000468	59.8	30-130			
Anthracene	0.102	0.00067	"	0.164	<0.000334	62.1	30-130			
Pyrene	0.0965	0.00067	"	0.164	<0.000643	58.8	30-130			
2-Methylnaphthalene	0.0858	0.00201	"	0.164	<0.00194	52.3	30-130			
Benzo(b)fluoranthene	0.078	0.00067	"	0.164	<0.000585	47.5	30-130			
Benzo(a)anthracene	0.102	0.00067	"	0.164	<0.000493	62.1	30-130			
Surrogate: Nitrobenzene-d5	48.3		"	0.329	181	48.3	29-110			
Surrogate: 4-Terphenyl-d14	52.5		"	0.329	188	52.5	33-122			
Surrogate: 2-Fluorobiphenyl	45.5		"	0.329	179	45.5	33-115			

LCS (LCS-L663761)		Prepared: 02/14/2023 Analyzed: 02/14/2023								
Chrysene	0.1	0.00067	mg/Kg	0.167		59.8	30-130			
Dibenz(a,h)anthracene	0.0749	0.00067	"	0.167		44.8	30-130			
Fluoranthene	0.102	0.00067	"	0.167		61	30-130			
Fluorene	0.0962	0.00067	"	0.167		57.6	30-130			
Indeno(1,2,3-cd)pyrene	0.0532	0.00067	"	0.167		31.8	30-130			
Naphthalene	0.0855	0.00201	"	0.167		51.1	30-130			
Benzo(k)fluoranthene	0.0679	0.00067	"	0.167		40.6	30-130			
Pyrene	0.0948	0.00067	"	0.167		56.7	30-130			
Benzo(a)pyrene	0.0989	0.00067	"	0.167		59.2	30-130			
Benzo(a)anthracene	0.101	0.00067	"	0.167		60.4	30-130			
Anthracene	0.0985	0.00067	"	0.167		58.9	30-130			
Acenaphthene	0.0945	0.00067	"	0.167		56.5	30-130			
2-Methylnaphthalene	0.0848	0.00201	"	0.167		50.7	30-130			
1-Methylnaphthalene	0.0875	0.00201	"	0.167		52.3	30-130			

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: [none]  
Project: Noble - Ocoma #C31-20D

**PAH by 8270D SIM - Quality Control**  
**Waypoint Analytical, LLC.**

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

**Batch L663761 - 3550B**

**LCS (LCS-L663761)**

Prepared: 02/14/2023 Analyzed: 02/14/2023

Benzo(b)fluoranthene	0.0788	0.00067	mg/Kg	0.167		47.1	30-130			
Surrogate: Nitrobenzene-d5	52.2		"	0.333		52.2	29-110			
Surrogate: 4-Terphenyl-d14	57		"	0.333		57	33-122			
Surrogate: 2-Fluorobiphenyl	50.7		"	0.333		50.7	33-115			

**LRB (LRB-L663761)**

Prepared: 02/14/2023 Analyzed: 02/14/2023

Chrysene	ND	0.00067	mg/Kg				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Naphthalene	ND	0.00201	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00201	"				-			
1-Methylnaphthalene	ND	0.00201	"				-			
Pyrene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
Surrogate: Nitrobenzene-d5	60.3		"	0.333		60.3	29-110			
Surrogate: 4-Terphenyl-d14	68.4		"	0.333		68.4	33-122			
Surrogate: 2-Fluorobiphenyl	56.4		"	0.333		56.4	33-115			

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: [none]

Project: Noble - Ocoma #C31-20D

### Notes and Definitions

U Sample is Non-Detect.

J Estimated Value. Analyte below reported quantitation limit.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported on 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.*