

# Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure
------------------------------------	--	-------------	--	----------------------	--	------------------	--	--------------------------------

Site Name & COGCC Facility Number: <i>Werning #7-2B</i>	Date: <i>6-8-21</i>	Remediation Project #: <i>17203</i>
--	------------------------	--

Associated Wells: <i>1</i> <i>05-123-25490</i>	Age of Site:	Number of Photos Attached: <i>1</i>
---	--------------	-------------------------------------

Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) <i>40.342580 -104.742080</i>	Estimated Facility Size (acres):
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General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

*Overall Good Condition*

USCS Soil Type:	Estimated Depth to Groundwater: <i>~6'</i>
-----------------	--

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*

### Wellhead(s)

Well API	05-123-25490					
Age						
Condition of surface around wellhead	<i>Good - Per Crew</i>					
PID Readings	<i>N/A - Excavated upon arrival</i>					
Condition of subsurface (excluding recent PID Readings)	<i>Good - no odor/no staining</i>					
Sample taken? Location/Sample ID	<i>56.2</i>	<i>43.7</i>	<i>52.6</i>	<i>45.3</i>		
	<i>WH-SS-01</i>	<i>WH-SS-02</i>	<i>WH-SS-03</i>	<i>WH-SS-04</i>		
	<i>e3.5'</i>	<i>e3.5'</i>	<i>e3.5'</i>	<i>e3.5'</i>		
Photo Number(s)	<i>EA6LE provided 1</i>					

Other observations regarding wellheads:

*Groundwater observed - Sample (WH-GW-01) collected - 1 sidewall sample submitted for soil analysis*

### Summary

Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: <i>4</i>	Total number of samples collected: <i>4</i>
--	---

Highest PID Reading: <i>56.2</i>	Total number of samples submitted to lab for analysis: <i>1</i>
----------------------------------	---

If more than 10 cubic yards of impacted soil were observed:

Vertical extent: <i>N/A</i>	Estimated spill volume:
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Lateral extent:	Volume of soil removed:
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Is additional investigation required?

Was groundwater encountered during the investigation?

No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils

Measured depth to groundwater: <i>~6'</i>	Was remedial groundwater removal conducted? <span style="margin-left: 20px;">Yes</span> <span style="margin-left: 20px;">No</span>
---	--

Date Groundwater was encountered: <i>6-8-21</i>	Commencement date of removal: <i>N/A</i>
---	--

Sheen on groundwater? <span style="margin-left: 20px;">Yes</span> <span style="margin-left: 20px;">No</span>	Volume of groundwater removed prior to sampling: <i>N/A</i>
--	---

Free product observed? <span style="margin-left: 20px;">Yes</span> <span style="margin-left: 20px;">No</span>	Volume of groundwater removed post sampling:
---	--

Total number of samples collected: <i>1</i>	Total Volume of groundwater removed: <i>N/A</i>
---	---

Total number of samples submitted to lab for analysis: <i>1</i>	
---	--



## **FIGURES**

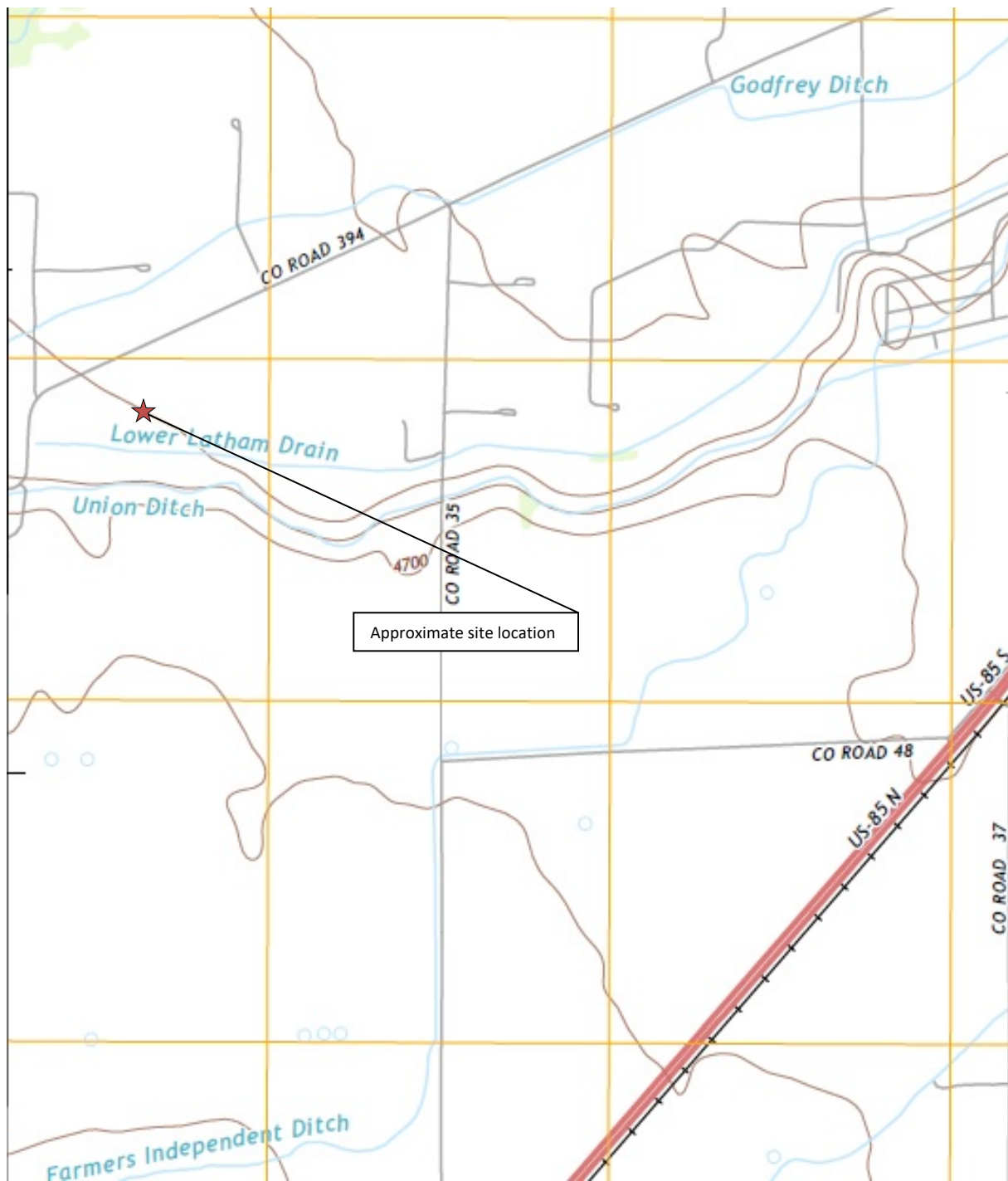
**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**

**Figure 4: Polycyclic Aromatic Hydrocarbons Map**

**Figure 5: Grab Groundwater Analytical Map**



**Topographic Site Location Map**  
 Werning #7-2B  
 Closure Assessment  
 40.342580 / -104.742080  
 SW¼ NE¼ Sec.2 T4N R66W 6PM  
 Weld County, Colorado  
 API # 05-123-25490  
 Remediation # 17203



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

**Figure 1**



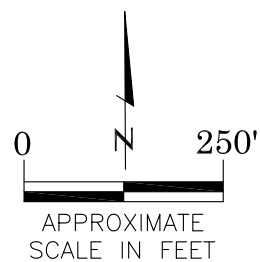
# LEGEND



ASSOCIATED TANK BATTERY



FORMER WERNING #7-2B WELLHEAD (PLUGGED AND ABANDONED)



## AERIAL SITE LOCATION MAP

WERNING #7-2B  
CLOSURE ASSESSMENT  
40.342580 / -104.742080  
SW1/4 NE1/4 SEC.2 T4N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-25490  
REMEDATION # 17203

DATE:

09/01/21

FIG. NO.

2

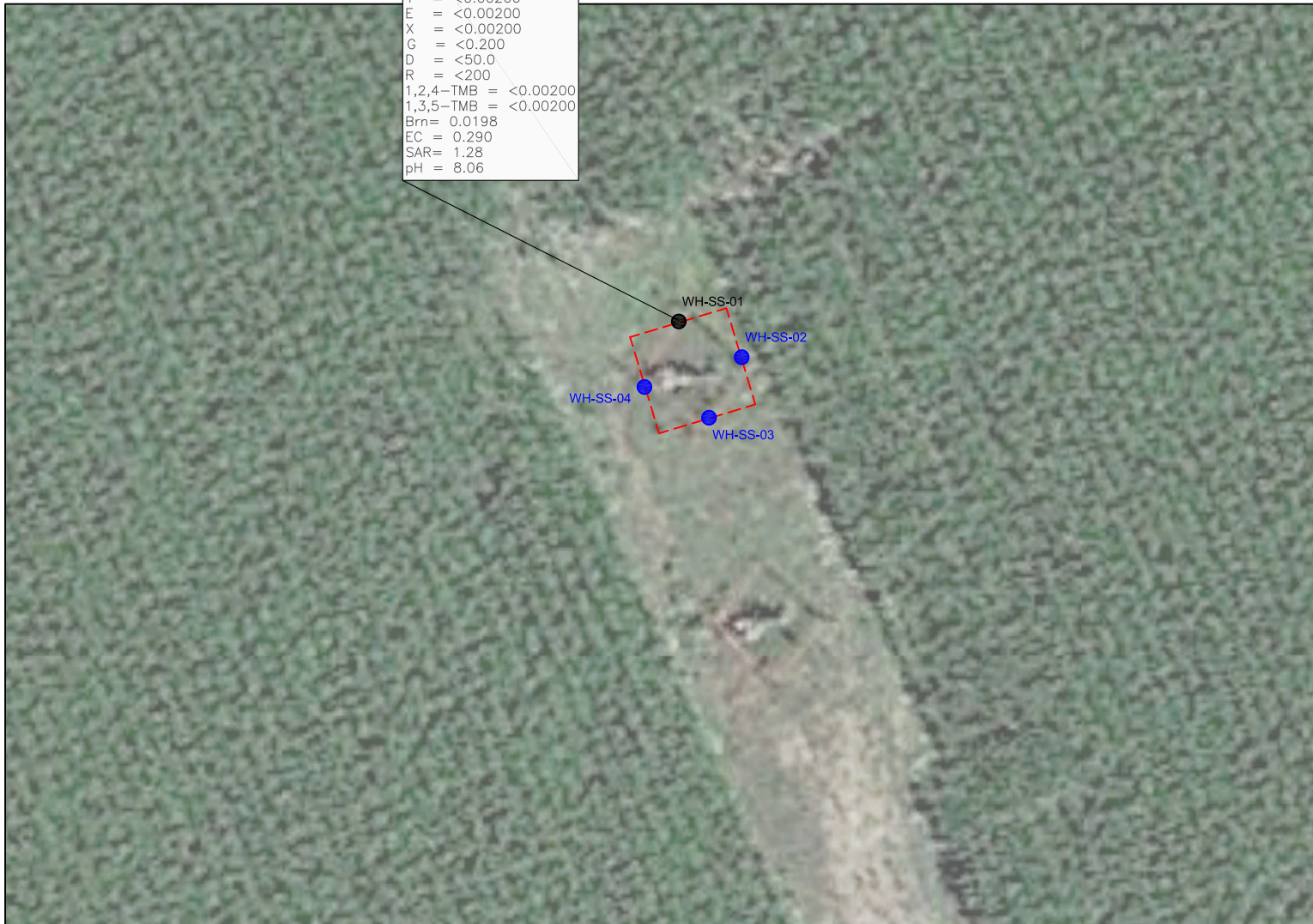
DRAWN BY:

AB



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CONSULTING, INC.

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



#### LEGEND

--- INITIAL ASSESSMENT BOUNDARIES

- APPROXIMATE LOCATION OF SOIL SAMPLES FIELD  
SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR  
WH-SS-01
- APPROXIMATE LOCATION OF SOIL SAMPLE SUBMITTED  
FOR LABORATORY ANALYSIS  
WH-SS-01

#### PARAMETERS

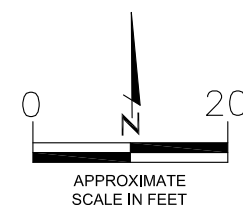
SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
G = TPH-GRO (mg/kg)  
D = TPH-DRO (mg/kg)  
R = TPH-RRO (mg/kg)  
1,2,4-TMB = 1,2,4 TRIMETHYLBENZENE (mg/kg)  
1,3,5-TMB = 1,3,5 TRIMETHYLBENZENE (mg/kg)  
Brn= BORON (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

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

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

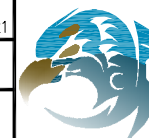


SOIL ANALYTICAL MAP  
WERNING #7-2B  
CLOSURE ASSESSMENT  
40.342580 / -104.742080  
SW1/4 NE1/4 SEC.2 T4N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-25490  
REMEDATION # 17203

DATE:  
09/01/21

DRAWN BY:  
AMN

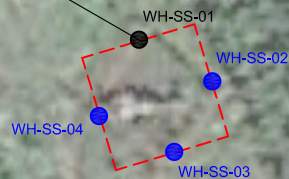
FIG.  
NO. 3



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WH-SS-01@3.5'  
06/08/21  
3.5'

1-Methylnaphthalene = <0.00335  
2-Methylnaphthalene = <0.00335  
Acenaphthene = <0.00335  
Anthracene = <0.00335  
Benzo(a)anthracene = <0.00335  
Benzo(a)pyrene = <0.00335  
Benzo(b)fluoranthene = <0.00335  
Benzo(k)fluoranthene = <0.00335  
Chrysene = <0.00335  
Dibenzo(a,h)anthracene = <0.00335  
Fluoranthene = <0.00335  
Fluorene = <0.00335  
Indeno(1,2,3-CD)pyrene = <0.00335  
Naphthalene = <0.00335  
Pyrene = <0.00335



#### LEGEND

--- INITIAL ASSESSMENT BOUNDARIES

● APPROXIMATE LOCATION OF SOIL SAMPLES FIELD  
SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR

● APPROXIMATE LOCATION OF SOIL SAMPLE SUBMITTED  
WH-SS-01 FOR LABORATORY ANALYSIS

#### PARAMETERS

SAMPLE LOCATION  
DATE SAMPLE COLLECTED  
APPROXIMATE DEPTH

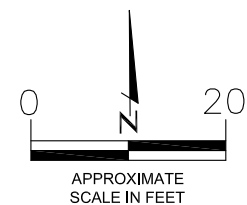
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)

NOTE:  
CONCENTRATIONS PRESENTED IN mg/kg

mg/kg = MILLIGRAMS PER KILOGRAM

MDL = MINIMUM DETECTION LIMIT

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



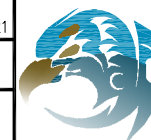
#### POLYCYCLIC AROMATIC HYDROCARBONS MAP

WERNING #7-2B  
CLOSURE ASSESSMENT  
40.342580 / -104.742080  
SW1/4 NE1/4 SEC.2 T4N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-25490  
REMEDIAL # 17203

DATE:  
09/01/21

DRAWN BY:  
AMN

FIG.  
NO. 4



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# LEGEND

--- INITIAL ASSESSMENT BOUNDARIES

● APPROXIMATE LOCATION OF GRAB GROUNDWATER SAMPLE SUBMITTED FOR LABORATORY ANALYSIS

## PARAMETERS

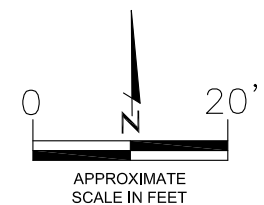
GROUNDWATER SAMPLE LOCATION  
DATE  
B = BENZENE (µg/L)  
T = TOLUENE (µg/L)  
E = ETHYLBENZENE (µg/L)  
X = TOTAL XYLENES (µg/L)  
N = NAPHTHALENE (µg/L)  
1,2,4-TMB = 1,2,4-TRIMETHYLBENZENE (µg/L)  
1,3,5-TMB = 1,3,5-TRIMETHYLBENZENE (µg/L)

µg/L = MILLIGRAMS PER LITER

NOTES:  
VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT OR ABOVE THE LABORATORY REPORTING LIMIT

VALUES PRESENTED IN **BOLD** EXCEED THE COGCC TABLE 915-1 REGULATORY LIMITS FOR THAT COMPOUND

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

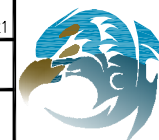


GRAB GROUNDWATER ANALYTICAL MAP  
WERNING #7-2B  
CLOSURE ASSESSMENT  
40.342580 / -104.742080  
SW1/4 NE1/4 SEC.2 T4N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-25490  
REMEDIATION # 17203

DATE:  
09/01/21

DRAWN BY:  
AMN

FIG.  
NO. 5



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## **TABLES**

**Table 1: Photoionization Detector Reading Summary**

**Table 2: Soil Analytical Results Summary**

**Table 3: Polycyclic Aromatic Hydrocarbons Analytical Results Summary**

**Table 4: Groundwater Analytical Results Summary**

**TABLE 1**  
**PHOTOIONIZATION DETECTOR READING SUMMARY**  
**WERNING #7-2B**  
**CLOSURE ASSESSMENT**  
**40.342580 / -104.742080**  
**SW1/4 NE1/4 SEC.2 T4N R66W 6PM**  
**WELD COUNTY, COLORADO**  
**API # 05-123-25490**  
**REMEDATION # 17203**

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 3.5' (40.342582 / -104.742116)	06/08/21	3.5	56.2	Y
WH-SS-02 @ 3.5' (40.342573 / -104.742090)	06/08/21	3.5	43.7	N
WH-SS-03 @ 3.5' (40.342557 / -104.742102)	06/08/21	3.5	52.6	N
WH-SS-04 @ 3.5' (40.342564 / -104.742126)	06/08/21	3.5	45.3	N
(Y/N) = Yes or No ppm-v = parts per million by volume PID - Photoionization Detector				

TABLE 2  
SOIL ANALYTICAL RESULTS SUMMARY  
WERNING #7-2B  
CLOSURE ASSESSMENT  
40.342580 / -104.742080  
SW1/4 NE1/4 SEC.2 T4N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-25490  
REMEDATION # 17203

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-RRO (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)	Boron (mg/L)	Specific Conductance (mmhos/cm)	pH (pH units)	SAR
<b>COGCC Table 915-1 Residential Screening Levels (mg/kg)</b>				1.20	490	5.8	58	500			30	27	2	<4	6-8.3	<6
<b>COGCC Table 915-1 Protection of Groundwater Soil Screening Levels</b>				0.0026	0.69	0.78	9.9	--			0.0081	0.0087	--	--	--	--
WH-SS-01 @ 3.5' (40.342582 / -104.742116)	06/08/21	3.5	56.2	<0.00200	<0.00200	<0.00200	<0.00200	<0.200	<50.0	<200	<0.00200	<0.00200	0.0198	0.290	8.06	1.28
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 Note: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory MDL and/or reporting limit. Note: Values presented in <b>BOLD</b> contained concentrations exceeding COGCC Table 915-1 Regulatory Limits																

TABLE 3  
PAH ANALYTICAL RESULTS SUMMARY  
WERNING #7-2B  
CLOSURE ASSESSMENT  
40.342580 / -104.742080  
SW1/4 NE1/4 SEC.2 T4N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-25490  
REMEDIATION # 17203

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm- v)	1-Methyl- naphthalene (mg/kg)	2-Methyl-naphthalene (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo(a)-anthracene (mg/kg)	Benzo(a)- pyrene (mg/kg)	Benzo(b)- fluoranthene (mg/kg)	Benzo(k)- fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo(a,h)- anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno(1,2,3- cd)-pyrene (mg/kg)	Naphthalene (mg/kg)	Pyrene (mg/kg)
<b>COGCC Table 915-1 Residential Screening Levels</b>				<b>18</b>	<b>24</b>	<b>360</b>	<b>1,800</b>	<b>1.1</b>	<b>0.11</b>	<b>1.1</b>	<b>11</b>	<b>110</b>	<b>0.11</b>	<b>240</b>	<b>240</b>	<b>1.1</b>	<b>2</b>	<b>180</b>
<b>COGCC Table 915-1 Protection of Groundwater Soil Screening Levels</b>				<b>0.006</b>	<b>0.019</b>	<b>0.55</b>	<b>5.8</b>	<b>0.011</b>	<b>0.24</b>	<b>0.3</b>	<b>2.9</b>	<b>9</b>	<b>0.096</b>	<b>8.9</b>	<b>0.54</b>	<b>0.98</b>	<b>0.0038</b>	<b>1.3</b>
WH-SS-01 @ 3.5' (40.343582 / -104.742116)	06/08/21	3.5	56.2	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335	<0.00335
COGCC = Colorado Oil and Gas Conservation Commission      PID = Photoionization Detector mg/kg = milligrams per kilogram      ppm-v = parts per million by volume      MDL = Minimum Detection Limit Note: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory MDL and/or reporting limit. Note: Values presented in <b>BOLD</b> contained concentrations exceeding COGCC Table 915-1 Regulatory Limits																		

TABLE 4  
GROUNDWATER ANALYTICAL RESULTS SUMMARY  
WERNING #7-2B  
CLOSURE ASSESSMENT  
40.342580 / -104.742080  
SW1/4 NE1/4 SEC.2 T4N R66W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-25490  
REMEDATION # 17203

Sample Location (Latitude/Longitude)	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	Naphthalene (µg/L)	1,2,4- Trimethylbenzene (µg/L)	1,3,5 - Trimethylbenzene (µg/L)
<b>COGCC Table 915-1 Regulatory Limits (µg/L)</b>		<b>5</b>	<b>560</b>	<b>700</b>	<b>1,400</b>	<b>140</b>	<b>67</b>	<b>67</b>
WH-GW-01 (40.342565 / -104.742106)	06/08/21	4.02	<1.00	<1.00	<1.00	<4.00	<1.00	<1.00
COGCC = Colorado Oil and Gas Conservation Commission µg/L - micrograms per liter Note: Values presented with a less than symbol (<) indicate concentrations were not observed at or above the laboratory reporting limit. Values presented in <b>bold</b> typeface exceed COGCC Table 915-1 regulatory limits for that compound.								



## **ATTACHMENT A**

### **Photo Log**

Werning #7-2B  
API # 05-123-25490  
Remediation # 17203

Wellhead Closure Assessment

June 2021



**EAGLE**  
ENVIRONMENTAL  
CONSULTING, INC.

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

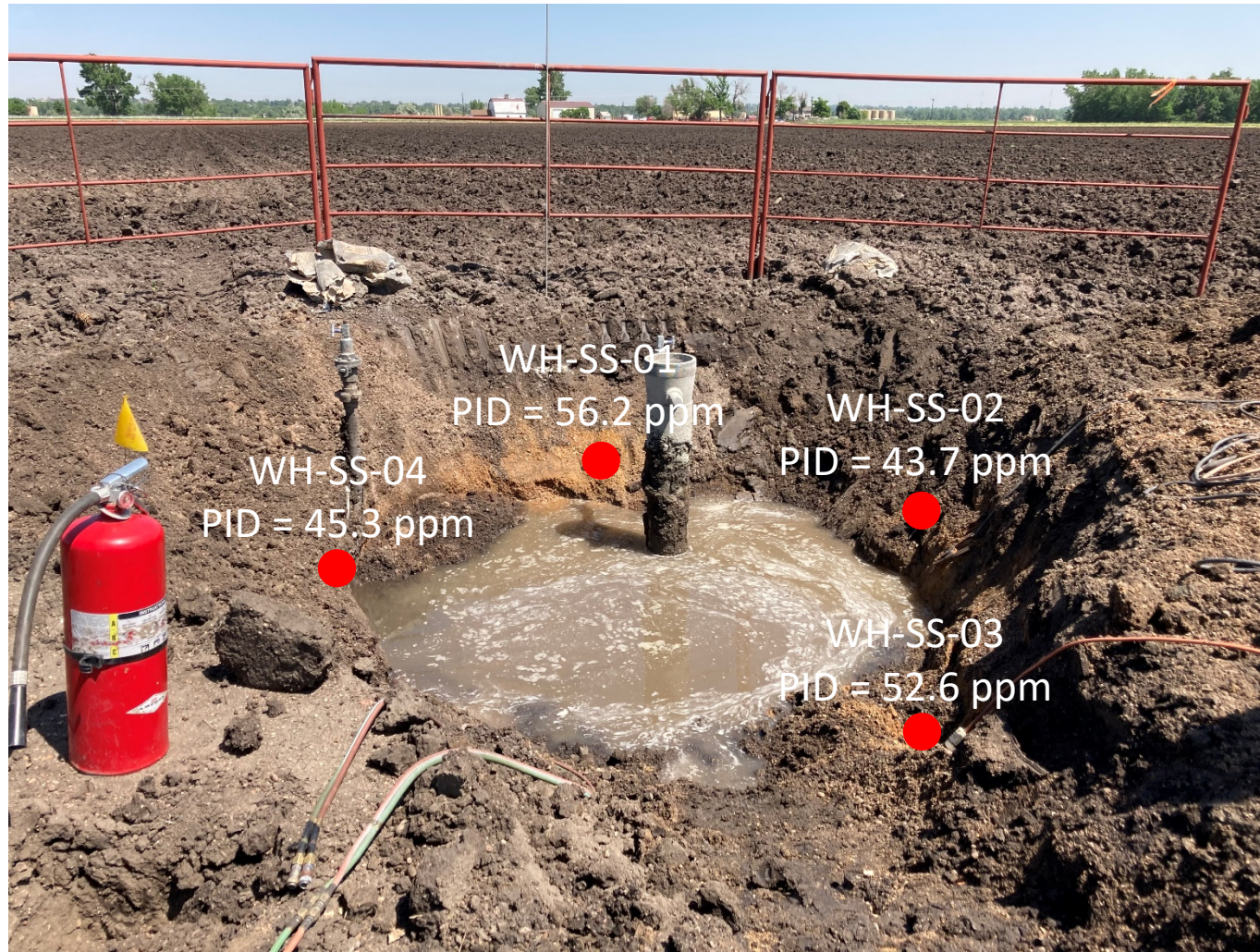


# Wellhead Excavation – 06/08/21

Looking north

No petroleum hydrocarbon staining or odor observed

Groundwater observed at ~6'. No sheen, no odor, no free product





## **ATTACHMENT B**

### **Laboratory Analytical Reports**



June 15, 2021

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

**Project Name - Noble - Werning #7-2B**

**Project Number - [none]**

Attached are your analytical results for Noble - Werning #7-2B received by Origins Laboratory, Inc. June 08, 2021. This project is associated with Origins project number Y106187-01.

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 - Werning #7-2B

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-GW-01	Y106187-01	Water	June 8, 2021 10:55	06/08/2021 15:45

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 - Werning #7-2B

**ORIGINS**  
LABORATORY, INC

www.originslaboratory.com

4100187

page 1 of 1

Client: Eagle Env. 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: Werning #7-2B  
Project Number: -  
Samples Collected By: AB

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 #		
WH-GW-01	6/8/21	1055	3	X	X	X	X	X	X	X	X	1
												2
												3
												4
												5
												6
												7
												8
												9
												10

Relinquished By: Amanda Bm Date: 6/8/21 Time: 1555  
Relinquished By: Date: Date: Time: Time: Turnaround Time: Same Day ☐ 24 Hr ☐ 48 Hr ☐ 72 Hr ☒ Standard

Date Results Needed: 6/11/21

Temp Received: 1.8

Bill to Job

Origins Laboratory, Inc.

*Jordan A. Merrill*

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 - Werning #7-2B

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

**Sample Receipt Checklist**

Origins Work Order: Y106187 Client: Eagle/Noble  
Client Project ID: Werning 7-2B

Checklist Completed by: dm Shipped Via: HD  
Date/time completed: 6/19/21 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
Airbill #: N/A

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

Cooler Number/Temperature: 1/1.8 °C /    °C /    °C (Describe)    °C

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<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>			<u>HCL</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) dm Date/Time Reviewed 6-10-21

Origins Laboratory, Inc.

*Jordan A. Merrill*

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 - Werning #7-2B

## WH-GW-01

6/8/2021 10:55:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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## Origins Laboratory, Inc. Y106187-01 (Water)

### BTEX+N+TMBs by 8260D

1,2,4-Trimethylbenzene	ND	1.00	ug/L	1	B1F0916	KDK	06/09/2021	06/09/2021	U
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Benzene	4.02	1.00	"	"	"	KDK	"	"	
Ethylbenzene	ND	1.00	"	"	"	KDK	"	"	U
Naphthalene	ND	4.00	"	"	"	KDK	"	"	U
Toluene	ND	1.00	"	"	"	KDK	"	"	U
Xylenes, total	ND	1.00	"	"	"	KDK	"	"	U

Surrogate: 1,2-Dichloroethane-d4	113 %	70-130	"	"	"
Surrogate: Toluene-d8	98.7 %	70-130	"	"	"
Surrogate: 4-Bromofluorobenzene	99.6 %	70-130	"	"	"

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0916 - EPA 5030B (Water)</b>										
<b>Blank (B1F0916-BLK1)</b>					Prepared: 06/09/2021 Analyzed: 06/09/2021					
1,2,4-Trimethylbenzene	ND	1.00	ug/L							U
1,3,5-Trimethylbenzene	ND	1.00	"							U
Benzene	ND	1.00	"							U
Ethylbenzene	ND	1.00	"							U
Naphthalene	ND	4.00	"							U
Toluene	ND	1.00	"							U
Xylenes, total	ND	1.00	"							U
Surrogate: 1,2-Dichloroethane-d4	71		"	62.5		114	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0916 - EPA 5030B (Water)</b>										
<b>LCS (B1F0916-BS1)</b>					Prepared: 06/09/2021 Analyzed: 06/09/2021					
1,2,4-Trimethylbenzene	53.6	1.00	ug/L	50.0		107	70-130			
1,3,5-Trimethylbenzene	55.8	1.00	"	50.0		112	70-130			
Benzene	50.3	1.00	"	50.0		101	70-130			
Ethylbenzene	54.2	1.00	"	50.0		108	70-130			
m,p-Xylene	108	2.00	"	100		108	70-130			
Naphthalene	49.4	4.00	"	50.0		98.9	70-130			
o-Xylene	52.6	1.00	"	50.0		105	70-130			
Toluene	51.3	1.00	"	50.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	69		"	62.5		110	70-130			
Surrogate: Toluene-d8	62		"	62.5		99.3	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.6	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0916 - EPA 5030B (Water)</b>										
<b>Matrix Spike (B1F0916-MS1)</b>		<b>Source: Y106168-02</b>			Prepared: 06/09/2021 Analyzed: 06/09/2021					
1,2,4-Trimethylbenzene	48.1	1.00	ug/L	50.0	ND	96.2	70-130			
1,3,5-Trimethylbenzene	49.6	1.00	"	50.0	ND	99.1	70-130			
Benzene	47.2	1.00	"	50.0	0.420	93.6	70-130			
Ethylbenzene	51.3	1.00	"	50.0	4.38	93.9	70-130			
m,p-Xylene	97.3	2.00	"	100	0.370	96.9	70-130			
Naphthalene	53.1	4.00	"	50.0	0.460	105	70-130			
o-Xylene	49.0	1.00	"	50.0	ND	98.0	70-130			
Toluene	47.2	1.00	"	50.0	ND	94.5	70-130			
Surrogate: 1,2-Dichloroethane-d4	70		"	62.5		112	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	62		"	62.5		99.5	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0916 - EPA 5030B (Water)</b>										
<b>Matrix Spike Dup (B1F0916-MSD1)</b>	<b>Source: Y106168-02</b>				Prepared: 06/09/2021 Analyzed: 06/10/2021					
1,2,4-Trimethylbenzene	48.8	1.00	ug/L	50.0	ND	97.6	70-130	1.47	20	
1,3,5-Trimethylbenzene	48.6	1.00	"	50.0	ND	97.1	70-130	2.02	20	
Benzene	47.1	1.00	"	50.0	0.420	93.4	70-130	0.212	20	
Ethylbenzene	51.3	1.00	"	50.0	4.38	93.8	70-130	0.0585	20	
m,p-Xylene	96.1	2.00	"	100	0.370	95.7	70-130	1.23	20	
Naphthalene	56.6	4.00	"	50.0	0.460	112	70-130	6.35	20	
o-Xylene	48.5	1.00	"	50.0	ND	96.9	70-130	1.11	20	
Toluene	46.7	1.00	"	50.0	ND	93.4	70-130	1.13	20	
Surrogate: 1,2-Dichloroethane-d4	71		"	62.5		114	70-130			
Surrogate: Toluene-d8	63		"	62.5		100	70-130			
Surrogate: 4-Bromofluorobenzene	63		"	62.5		101	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

8000 W 44th Ave

Wheat Ridge CO 80033

Martin C Eckert III

Project Number: [none]

Project: Noble - Werning #7-2B

### Notes and Definitions

U Sample is Non-Detect.

ND Analyte NOT DETECTED at or above the reporting limit

RPD Relative Percent Difference

All soil results are reported at a wet weight basis.

Origins Laboratory, Inc.



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



June 17, 2021

Eagle Environmental Consulting, Inc.

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Werning #7-2B

Project Number - [none]

Attached are your analytical results for Noble - Werning #7-2B received by Origins Laboratory, Inc. June 08, 2021. This project is associated with Origins project number Y106189-01.

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 - Werning #7-2B

## CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WH-SS-01@3.5'	Y106189-01	Soil	June 8, 2021 11:00	06/08/2021 15:45

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

8000 W 44th Ave

Wheat Ridge CO 80033

Martin C Eckert III

Project Number: [none]

Project: Noble - Werning #7-2B

Origins Laboratory

## Sample Receipt Checklist

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

Origins Work Order: Y106189

Client: Eagle/Noble

Client Project ID: Werning T-2B

Checklist Completed by: jm

Shipped Via: HD

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

Date/time completed: 6/19/21

Airbill #: N/A

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

Cooler Number/Temperature: 1, 1.8 °C        /        °C        /        °C (Describe)

Thermometer ID: T003

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)</sup> ?	<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? <b>If yes, contact client and note in narrative.</b>			<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) jm

Date/Time Reviewed 6-10-21

Origins Laboratory, Inc.

*Jordan A. Merrill*

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 - Werning #7-2B

WH-SS-01@3.5'  
6/8/2021 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Origins Laboratory, Inc.  
Y106189-01 (Soil)

## Boron (DTPA Sorbitol)

Boron	0.0198	0.0989	mg/kg	1	B1F1018	ZZZ	06/10/2021	06/10/2021	
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## DRO/ORO by EPA 8015D

Diesel (C10-C28)	ND	50.0	mg/kg	1	B1F1005	TEM	06/10/2021	06/10/2021	U
Residual Range Organics (C28-C40)	ND	200	"	"	"	TEM	"	"	U

Surrogate: o-Terphenyl	72.9 %	50-150			"	"	"	
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## GBTEX+TMBs

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg	1	B1F0917	TEM	06/09/2021	06/10/2021	U
1,3,5-Trimethylbenzene	ND	0.00200	"	"	"	TEM	"	"	U
Benzene	ND	0.00200	"	"	"	TEM	"	"	U
Ethylbenzene	ND	0.00200	"	"	"	TEM	"	"	U
Toluene	ND	0.00200	"	"	"	TEM	"	"	U
Gasoline Range Hydrocarbons	ND	0.200	"	"	"	TEM	"	"	U
Xylenes, total	ND	0.00200	"	"	"	TEM	"	"	U

Surrogate: 1,2-Dichloroethane-d4	115 %	70-130			"	"	"	
Surrogate: Toluene-d8	83.7 %	70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	77.0 %	70-130			"	"	"	

## Metals by Saturated Paste

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

WH-SS-01@3.5'

6/8/2021 11:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y106189-01 (Soil)**

**Metals by Saturated Paste**

Calcium	0.956	meq/L	1	[CALC]	CJM	06/10/2021	06/11/2021
Magnesium	0.512	"	"	"	CJM	"	"
Sodium	1.10	"	"	"	CJM	"	"

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00335	mg/Kg	5	L557994	06/11/2021	06/11/2021
2-Methylnaphthalene	ND	0.00335	"	"	"	"	"
Acenaphthene	ND	0.00335	"	"	"	"	"
Anthracene	ND	0.00335	"	"	"	"	"
Benzo(a)anthracene	ND	0.00335	"	"	"	"	"
Benzo(a)pyrene	ND	0.00335	"	"	"	"	"
Benzo(b)fluoranthene	ND	0.00335	"	"	"	"	"
Benzo(k)fluoranthene	ND	0.00335	"	"	"	"	"
Chrysene	ND	0.00335	"	"	"	"	"
Dibenz(a,h)anthracene	ND	0.00335	"	"	"	"	"
Fluoranthene	ND	0.00335	"	"	"	"	"
Fluorene	ND	0.00335	"	"	"	"	"
Indeno(1,2,3-cd)pyrene	ND	0.00335	"	"	"	"	"
Naphthalene	ND	0.00335	"	"	"	"	"
Pyrene	ND	0.00335	"	"	"	"	"

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

WH-SS-01@3.5'

6/8/2021 11:00:00AM

Analyte	Result	Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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Waypoint Analytical, Inc.  
Y106189-01 (Soil)

## PAH by 8270D SIM

Surrogate: 2-Fluorobiphenyl	75.8 %	33-115			L5579 94	06/11/2021	06/11/2021
Surrogate: 4-Terphenyl-d14	79.1 %	33-122			"	"	"
Surrogate: Nitrobenzene-d5	56.1 %	29-110			"	"	"

## pH in Soil by EPA 9045D

pH	8.06	pH Units	1	B1F1025	DJL	06/10/2021	06/15/2021
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## SAR by 20B Saturated Paste

SAR	1.28	SAR	1	B1F1027	CJM	06/10/2021	06/11/2021
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## Specific Conductance by Modified 9050A

Specific Conductance (EC)	0.290	0.00500 mmhos/cm	1	B1F1026	DJL	06/10/2021	06/15/2021
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0917 - EPA 5030 (soil)</b>										
<b>Blank (B1F0917-BLK1)</b>					Prepared: 06/09/2021 Analyzed: 06/10/2021					
1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							U
Naphthalene	ND	0.0100	"							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	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.14		"	0.125		112	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0917 - EPA 5030 (soil)</b>										
<b>LCS (B1F0917-BS1)</b>					Prepared: 06/09/2021 Analyzed: 06/10/2021					
1,2,4-Trimethylbenzene	0.0592	0.00200	mg/kg	0.0500		118	70-130			
Naphthalene	0.0540	0.0100	"	0.0500		108	70-130			
1,3,5-Trimethylbenzene	0.0594	0.00200	"	0.0500		119	70-130			
Benzene	0.0466	0.00200	"	0.0500		93.2	70-130			
Ethylbenzene	0.0591	0.00200	"	0.0500		118	70-130			
m,p-Xylene	0.118	0.00400	"	0.100		118	70-130			
o-Xylene	0.0554	0.00200	"	0.0500		111	70-130			
Toluene	0.0549	0.00200	"	0.0500		110	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.14		"	0.125		112	70-130			
Surrogate: Toluene-d8	0.14		"	0.125		111	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0917 - EPA 5030 (soil)</b>										
<b>Matrix Spike (B1F0917-MS1)</b>		<b>Source: Y106178-01</b>			Prepared: 06/09/2021 Analyzed: 06/10/2021					
1,2,4-Trimethylbenzene	0.0622	0.00200	mg/kg	0.0500	ND	124	70-130			
Naphthalene	0.0503	0.0100	"	0.0500	0.00162	97.3	70-130			
1,3,5-Trimethylbenzene	0.0626	0.00200	"	0.0500	ND	125	70-130			
Benzene	0.0500	0.00200	"	0.0500	ND	100	70-130			
Ethylbenzene	0.0618	0.00200	"	0.0500	ND	124	70-130			
m,p-Xylene	0.124	0.00400	"	0.100	ND	124	70-130			
o-Xylene	0.0580	0.00200	"	0.0500	ND	116	70-130			
Toluene	0.0584	0.00200	"	0.0500	ND	117	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		107	70-130			
Surrogate: Toluene-d8	0.14		"	0.125		111	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	70-130			

Origins Laboratory, Inc.



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Wheat Ridge CO 80033

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F0917 - EPA 5030 (soil)</b>										
<b>Matrix Spike Dup (B1F0917-MSD1)</b>		<b>Source: Y106178-01</b>			Prepared: 06/09/2021 Analyzed: 06/10/2021					
1,2,4-Trimethylbenzene	0.0541	0.00200	mg/kg	0.0500	ND	108	70-130	13.8	20	
Naphthalene	0.0437	0.0100	"	0.0500	0.00162	84.2	70-130	14.0	20	
1,3,5-Trimethylbenzene	0.0547	0.00200	"	0.0500	ND	109	70-130	13.5	20	
Benzene	0.0447	0.00200	"	0.0500	ND	89.4	70-130	11.1	20	
Ethylbenzene	0.0550	0.00200	"	0.0500	ND	110	70-130	11.5	20	
m,p-Xylene	0.110	0.00400	"	0.100	ND	110	70-130	11.9	20	
o-Xylene	0.0515	0.00200	"	0.0500	ND	103	70-130	11.9	20	
Toluene	0.0517	0.00200	"	0.0500	ND	103	70-130	12.2	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		106	70-130			
Surrogate: Toluene-d8	0.14		"	0.125		111	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		103	70-130			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

8000 W 44th Ave

Wheat Ridge CO 80033

Martin C Eckert III

Project Number: [none]

Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch B1F1005 - EPA 3550B</b>										
<b>Blank (B1F1005-BLK1)</b>					Prepared: 06/10/2021 Analyzed: 06/11/2021					
Diesel (C10-C28)	ND	50.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	200	"							U
Surrogate: o-Terphenyl	41		"	50.0		81.7	50-150			

Origins Laboratory, Inc.



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Eagle Environmental Consulting, Inc.

8000 W 44th Ave

Wheat Ridge CO 80033

Martin C Eckert III

Project Number: [none]

Project: Noble - Werning #7-2B

## 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 B1F1005 - EPA 3550B

### LCS (B1F1005-BS1)

Prepared: 06/10/2021 Analyzed: 06/10/2021

Diesel (C10-C28)	990	50.0	mg/kg	1000		99.0	70-130			
Residual Range Organics (C28-C40)	951	200	"	1000		95.1	70-130			
Surrogate: o-Terphenyl	44		"	50.0		88.2	50-150			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

**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 B1F1005 - EPA 3550B**

Matrix Spike (B1F1005-MS1)		Source: Y106200-01			Prepared: 06/10/2021 Analyzed: 06/10/2021					
Diesel (C10-C28)	1020	50.0	mg/kg	1000	ND	102	70-130			
Residual Range Organics (C28-C40)	1020	200	"	1000	56.5	96.2	70-130			
Surrogate: o-Terphenyl	42		"	50.0		83.1	50-150			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

## 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 B1F1005 - EPA 3550B

Matrix Spike Dup (B1F1005-MSD1)		Source: Y106200-01			Prepared: 06/10/2021 Analyzed: 06/10/2021					
Diesel (C10-C28)	1050	50.0	mg/kg	1000	ND	105	70-130	2.87	35	
Residual Range Organics (C28-C40)	1110	200	"	1000	56.5	105	70-130	8.44	35	
Surrogate: o-Terphenyl	42		"	50.0		84.6	50-150			

Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

## 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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## Saturated Paste - 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 B1F1025 - NO PREP

##### Duplicate (B1F1025-DUP1)

Source: Y106247-02

Prepared: 06/10/2021 Analyzed: 06/15/2021

pH	8.14	pH Units	8.13	0.123	25
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#### Batch B1F1026 - NO PREP

##### Blank (B1F1026-BLK1)

Prepared: 06/10/2021 Analyzed: 06/15/2021

Specific Conductance (EC)	0.00360	0.00500	mmhos/cm
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##### Duplicate (B1F1026-DUP1)

Source: Y106247-02

Prepared: 06/10/2021 Analyzed: 06/15/2021

Specific Conductance (EC)	1.75	0.00500	mmhos/cm	1.84	4.67	25
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L557994 - 3550B**

MSD (L 93801-MSD-L557994)		Source: 93801			Prepared: 06/11/2021 Analyzed: 06/11/2021					
Chrysene	0.106	0.000256	mg/Kg	0.166	<0.000256	63.8	30-130	21.8	30	
1-Methylnaphthalene	0.0968	0.00048	"	0.166	<0.000480	58.3	30-130	31.5	30	
2-Methylnaphthalene	0.0974	0.000542	"	0.166	<0.000542	58.6	30-130	30.9	30	
Acenaphthene	0.1	0.000431	"	0.166	<0.000431	60.2	30-130	26	30	
Anthracene	0.11	0.000426	"	0.166	<0.000426	66.2	30-130	28.1	30	
Benzo(a)anthracene	0.104	0.000441	"	0.166	<0.000441	62.6	30-130	29.5	30	
Pyrene	0.115	0.000387	"	0.166	0.000413	69.2	30-130	25	30	
Benzo(b)fluoranthene	0.0834	0.000138	"	0.166	<0.000138	50.2	30-130	35.1	30	
Naphthalene	0.0895	0.000467	"	0.166	<0.000467	53.9	30-130	28.2	30	
Indeno(1,2,3-cd)pyrene	0.0894	0.000344	"	0.166	<0.000344	53.8	30-130	39.2	30	
Fluorene	0.106	0.000501	"	0.166	<0.000501	63.8	30-130	27.6	30	
Fluoranthene	0.117	0.000529	"	0.166	<0.000529	70.4	30-130	25.3	30	
Dibenz(a,h)anthracene	0.0956	0.000279	"	0.166	<0.000279	57.5	30-130	34.8	30	
Benzo(k)fluoranthene	0.0866	0.000486	"	0.166	<0.000486	52.1	30-130	21	30	
Benzo(a)pyrene	0.104	0.000133	"	0.166	<0.000133	62.6	30-130	28	30	
Surrogate: 2-Fluorobiphenyl	76.2		"	0.332	220	76.2	33-115			
Surrogate: 4-Terphenyl-d14	78		"	0.332	231	78	33-122			
Surrogate: Nitrobenzene-d5	61.7		"	0.332	165	61.7	29-110			

MS (L 93801-MS-L557994)		Source: 93801			Prepared: 06/11/2021 Analyzed: 06/11/2021					
Benzo(b)fluoranthene	0.119	0.000138	mg/Kg	0.166	<0.000138	71.6	30-130			
Dibenz(a,h)anthracene	0.136	0.000279	"	0.166	<0.000279	81.9	30-130			
Pyrene	0.148	0.000387	"	0.166	0.000413	89.1	30-130			
Naphthalene	0.119	0.000467	"	0.166	<0.000467	71.6	30-130			
Indeno(1,2,3-cd)pyrene	0.133	0.000344	"	0.166	<0.000344	80.1	30-130			
Fluorene	0.14	0.000501	"	0.166	<0.000501	84.3	30-130			
Fluoranthene	0.151	0.000529	"	0.166	<0.000529	90.9	30-130			

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8000 W 44th Ave  
Wheat Ridge CO 80033

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch L557994 - 3550B**

MS (L 93801-MS-L557994)		Source: 93801			Prepared: 06/11/2021 Analyzed: 06/11/2021					
2-Methylnaphthalene	0.133	0.000542	mg/Kg	0.166	<0.000542	80.1	30-130			
Benzo(a)pyrene	0.138	0.000133	"	0.166	<0.000133	83.1	30-130			
Benzo(a)anthracene	0.14	0.000441	"	0.166	<0.000441	84.3	30-130			
Anthracene	0.146	0.000426	"	0.166	<0.000426	87.9	30-130			
Acenaphthene	0.13	0.000431	"	0.166	<0.000431	78.3	30-130			
Benzo(k)fluoranthene	0.107	0.000486	"	0.166	<0.000486	64.4	30-130			
1-Methylnaphthalene	0.133	0.00048	"	0.166	<0.000480	80.1	30-130			
Chrysene	0.132	0.000256	"	0.166	<0.000256	79.5	30-130			
Surrogate: Nitrobenzene-d5	63.4		"	0.331	165	63.4	29-110			
Surrogate: 4-Terphenyl-d14	74.6		"	0.331	231	74.6	33-122			
Surrogate: 2-Fluorobiphenyl	76.4		"	0.331	220	76.4	33-115			

LCS (LCS-L557994)		Prepared: 06/11/2021 Analyzed: 06/11/2021								
Dibenz(a,h)anthracene	0.125	0.000279	mg/Kg	0.167		74.8	30-130			
Fluoranthene	0.151	0.000529	"	0.167		90.4	30-130			
Fluorene	0.141	0.000501	"	0.167		84.4	30-130			
Indeno(1,2,3-cd)pyrene	0.117	0.000344	"	0.167		70	30-130			
Naphthalene	0.118	0.000467	"	0.167		70.6	30-130			
Pyrene	0.148	0.000387	"	0.167		88.6	30-130			
Acenaphthene	0.131	0.000431	"	0.167		78.4	30-130			
Chrysene	0.137	0.000256	"	0.167		82	30-130			
Benzo(b)fluoranthene	0.116	0.000138	"	0.167		69.4	30-130			
Benzo(a)pyrene	0.138	0.000133	"	0.167		82.6	30-130			
Anthracene	0.146	0.000426	"	0.167		87.4	30-130			
2-Methylnaphthalene	0.131	0.000542	"	0.167		78.4	30-130			
1-Methylnaphthalene	0.131	0.00048	"	0.167		78.4	30-130			
Benzo(a)anthracene	0.137	0.000441	"	0.167		82	30-130			

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Wheat Ridge CO 80033

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Werning #7-2B

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L557994 - 3550B</b>										
<b>LCS (LCS-L557994)</b>					Prepared: 06/11/2021 Analyzed: 06/11/2021					
Benzo(k)fluoranthene	0.105	0.000486	mg/Kg	0.167		62.8	30-130			
Surrogate: Nitrobenzene-d5	61.2		"	0.333		61.2	29-110			
Surrogate: 4-Terphenyl-d14	76.2		"	0.333		76.2	33-122			
Surrogate: 2-Fluorobiphenyl	75.6		"	0.333		75.6	33-115			
<b>LRB (LRB-L557994)</b>					Prepared: 06/11/2021 Analyzed: 06/11/2021					
Pyrene	ND	0.00067	mg/Kg				-			
Dibenz(a,h)anthracene	ND	0.00067	"				-			
Fluoranthene	ND	0.00067	"				-			
Fluorene	ND	0.00067	"				-			
Indeno(1,2,3-cd)pyrene	ND	0.00067	"				-			
Chrysene	ND	0.00067	"				-			
Acenaphthene	ND	0.00067	"				-			
Naphthalene	ND	0.00067	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Benzo(b)fluoranthene	ND	0.00067	"				-			
Benzo(a)pyrene	ND	0.00067	"				-			
Anthracene	ND	0.00067	"				-			
2-Methylnaphthalene	ND	0.00067	"				-			
1-Methylnaphthalene	ND	0.00067	"				-			
Benzo(a)anthracene	ND	0.00067	"				-			
Surrogate: Nitrobenzene-d5	51.9		"	0.333		51.9	29-110			
Surrogate: 4-Terphenyl-d14	71.1		"	0.333		71.1	33-122			
Surrogate: 2-Fluorobiphenyl	69		"	0.333		69	33-115			

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8000 W 44th Ave

Wheat Ridge CO 80033

Martin C Eckert III

Project Number: [none]

Project: Noble - Werning #7-2B

### 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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