

## Tank Battery Closure Checklist

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

Additional attachments (optional):		Pit Closure <b>—</b>		Wellhead Closure 1-6-23		Flowline Closure 3-17-23		Partially Buried Vault Closure 3-14-23
Site Name & COGCC Facility Number: Loustelet T5N-R64W-S15		Date: L01 Tank Battery; Location ID: 447668			Date: 3-14-23			Remediation Project #: 23570
Associated Wells: 05-123-15012		Age of Site: _____ Years						Number of Photos Attached: 5
Location: (GPS coordinates of southeaster berm) 40.395146 / -104.536147							Estimated Facility Size (acres):	

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

Good Condition

USCS Soil Type: SC

Estimated Depth to Groundwater: ~5'

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.

### Tanks

Tank Contents	Crude								
Size (barrels)	300								
Age	Years								
Construction Material	Steel								
Tank type (AST/DPV, etc.)	AST								
Visual Integrity of Tank	Good								
Condition of tank footings	Good - no staining/no odor								
PID Readings	N/A								
Soil impacts present at valves or hatches?	None observed.								
PID Readings	1.5								
Sample taken? Location/ Sample ID#	TB-SS-05								
Photo Number(s)	See photolog								

Other observations regarding tanks:

### Separators

Separator size	Unknown								
Vertical or Horizontal	Horizontal								
Age	Years								
Soil impacts present at valves or hatches?	None observed.								
PID Readings	1.7	1.3							
Sample taken? Location/ Sample ID#	TB-SS-03	TB-SS-04							
Photo Number(s)	See photolog								

Other observations regarding separators

Separator flowline and dumpline connections assessed.

### Third Party Equipment

Type	Meter House								
Age	Years								

Third Party <i>Owner</i>	Unknown								
Removal Date	N/A								
Sample taken? <i>Location/ Sample</i>	TB-SS-02								
PID Readings	1.0								
Photo Number(s)	See photolog								

### Other Facility Equipment

Equipment type	VOC Burner				
Equipment <i>Condition</i>	Good - Per Crew				
Age	Years				
Soil impacts	None observed.				
PID Readings	0.8				
Sample taken? <i>Location/ Sample</i>	TB-SS-01				
Photo Number(s)	See photolog				

Other observations regarding other facility or third party equipment:

### Summary

Was impacted soil identified?	
<input checked="" type="checkbox"/> No	Yes - less than 10 cubic yards      Yes - more than 10 cubic yards
Total number of samples field screened: 5	Total number of samples collected: 5
Highest PID Reading: 1.7	Total number of samples submitted to lab for analysis: 2
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent:	Estimated spill volume:
Lateral extent:	Volume of soil removed:
<b>N/A</b>	
Is additional investigation required?	
Was groundwater encountered during the investigation?	
<input checked="" type="checkbox"/> 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:
<b>N/A</b>	
Total number of samples collected:	Total Volume of groundwater removed:
Total number of samples submitted to lab for analysis:	

## Buried or Partially Buried Vessel Closure Checklist

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

Additional attachments (optional):		Pit Closure <b>—</b>		Wellhead Closure 1-6-23		Flowline Closure 3-17-23		Tank Battery Closure 3-14-23
Site Name & COGCC Facility Number: Loustelet T5N-R64W-S15		Date: L01 Tank Battery; Location ID: 447668				3-14-23		Remediation Project #: 23570
Associated Wells: 05-123-15012		Age of Site: Years				Number of Photos Attached: 1		
Location: (GPS coordinates of vault or southeastern tank berm for multiple) 40.395146 / -104.536147							Estimated Facility Size (acres):	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)  Good Condition								
USCS Soil Type: SC				Estimated Depth to Groundwater: ~5'				
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) Black staining and slight petroleum hydrocarbon odor observed within excavation.								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) None observed.								
Buried or Partially Buried Vessels								
Tank Contents	Produced Water							
Size (barrels)	<100							
Age	Years							
Construction Material	Concrete							
Visual Integrity of Tank	Good							
Condition of tank contents	Black staining and slight petroleum hydrocarbon odor observed							
PID Readings	N/A							
Condition of Access Lines	Good							
PID Readings	1.9	2.8	89.8	3.9	68.5			
Sample taken? Location/Sample ID#	WV-SS-01	WV-SS-02	WV-SS-03	WV-SS-04	WV-FS-01			
Photo Number(s)	See photolog							
Other observations regarding partially buried vessels:								
Summary								
Was impacted soil identified? No <input type="checkbox"/> Yes - less than 10 cubic yards <input checked="" type="checkbox"/> Yes - more than 10 cubic yards <input type="checkbox"/>								
Total number of samples field screened: 5				Total number of samples collected: 5				
Highest PID Reading: 89.8				Total number of samples submitted to lab for analysis: 5				
If more than 10 cubic yards of impacted soil were observed:								
Vertical extent:				Estimated spill volume:				
Lateral extent: N/A				Volume of soil removed:				
Is additional investigation required?								
Was groundwater encountered during the investigation? <input checked="" type="checkbox"/> 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 N/A				Volume of groundwater removed prior to sampling:				
Free product observed? Yes No N/A				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**

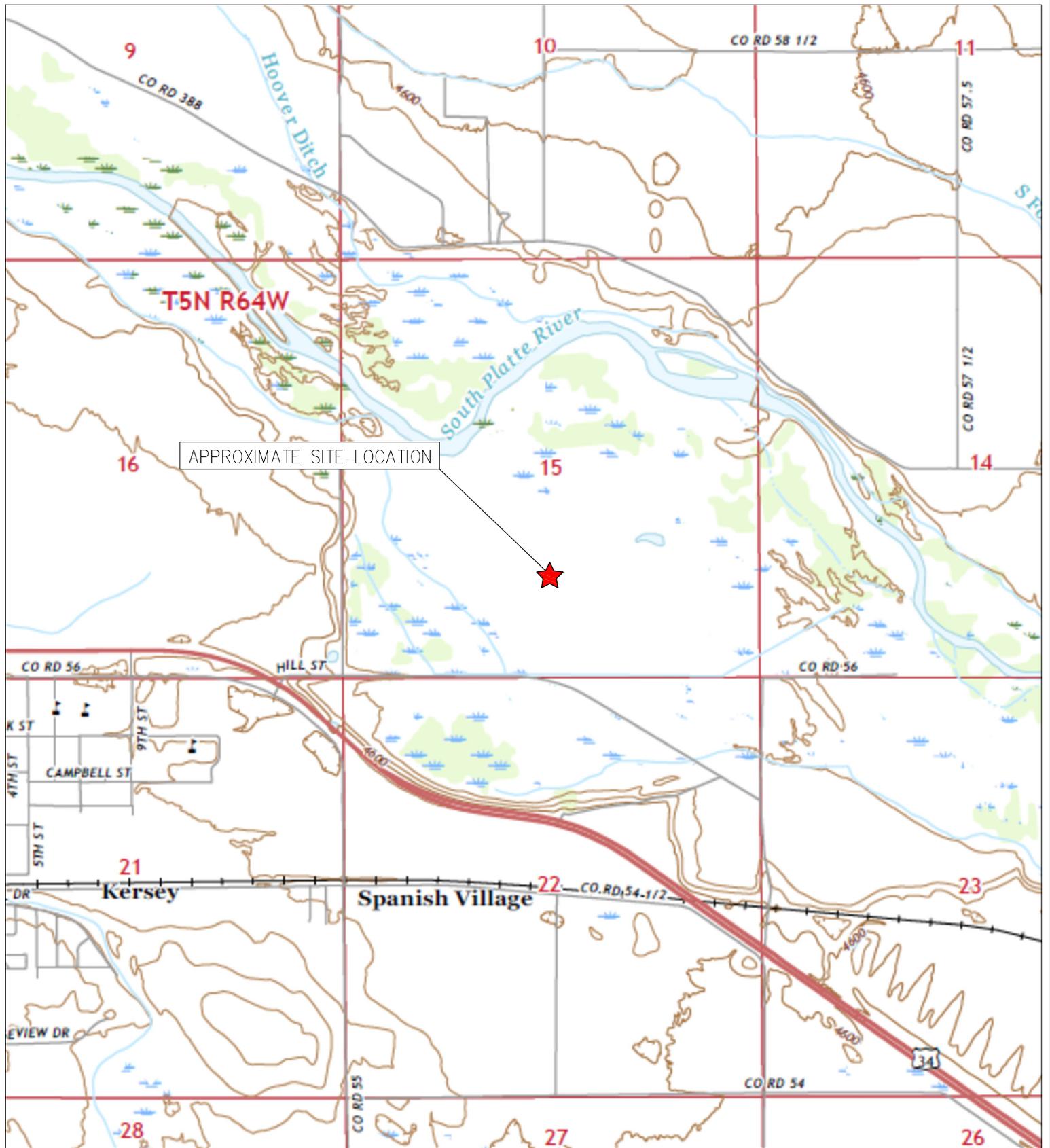
**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**

**Figure 4: Polycyclic Aromatic Hydrocarbons Map**

**Figure 3: Metals in Soil Map**



APPROXIMATE SITE LOCATION



TOPOGRAPHIC SITE LOCATION MAP  
 LOUSTELET T5N-R64W-S15 L01 TANK BATTERY  
 CLOSURE ASSESSMENT  
 40.395146 / -104.536147  
 SE¼ SW¼ SEC.15 T5N R64W 6PM  
 WELD COUNTY, COLORADO  
 LOCATION ID 447668  
 REMEDIATION # 23570

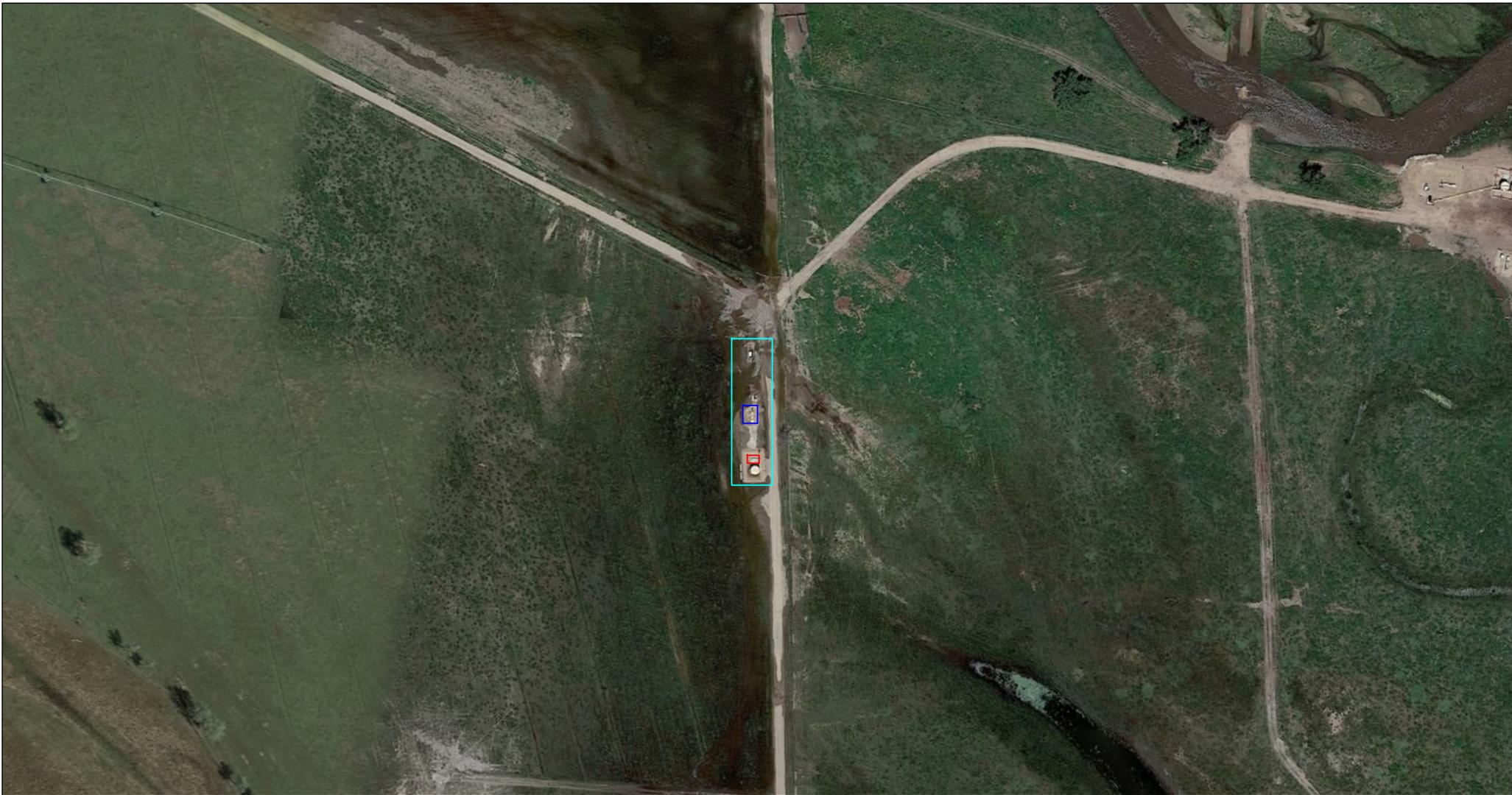


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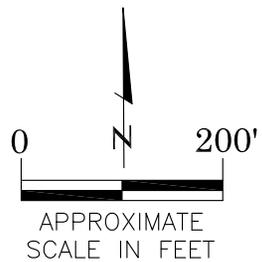
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,  
 KERSEY, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

- FORMER LOUSTELET T5N-R64W-S15 L01 TANK BATTERY (DECOMMISSIONED)
- SEPARATOR CONTAINMENT AREA (DECOMMISSIONED)
- WATER VAULT LOCATION (REMOVED)



AERIAL SITE LOCATION MAP  
LOUSTELET T5N-R64W-S15 L01 TANK BATTERY  
CLOSURE ASSESSMENT  
40.395146 / -104.536147  
SE $\frac{1}{4}$  SW $\frac{1}{4}$  SEC.15 T5N R64W 6PM  
WELD COUNTY, COLORADO  
LOCATION ID 447668  
REMEDATION # 23570

FIGURE NO.  
2

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**LEGEND**

- WATER VAULT ASSESSMENT BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- 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 ECMC TABLE 915-1 REGULATORY LIMITS

VALUES PRESENTED WITH ASTERISK (\*) EXCEED ECMC TABLE 915-1 PROTECTION OF GROUNDWATER SOIL SCREENING LEVELS, ONLY.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

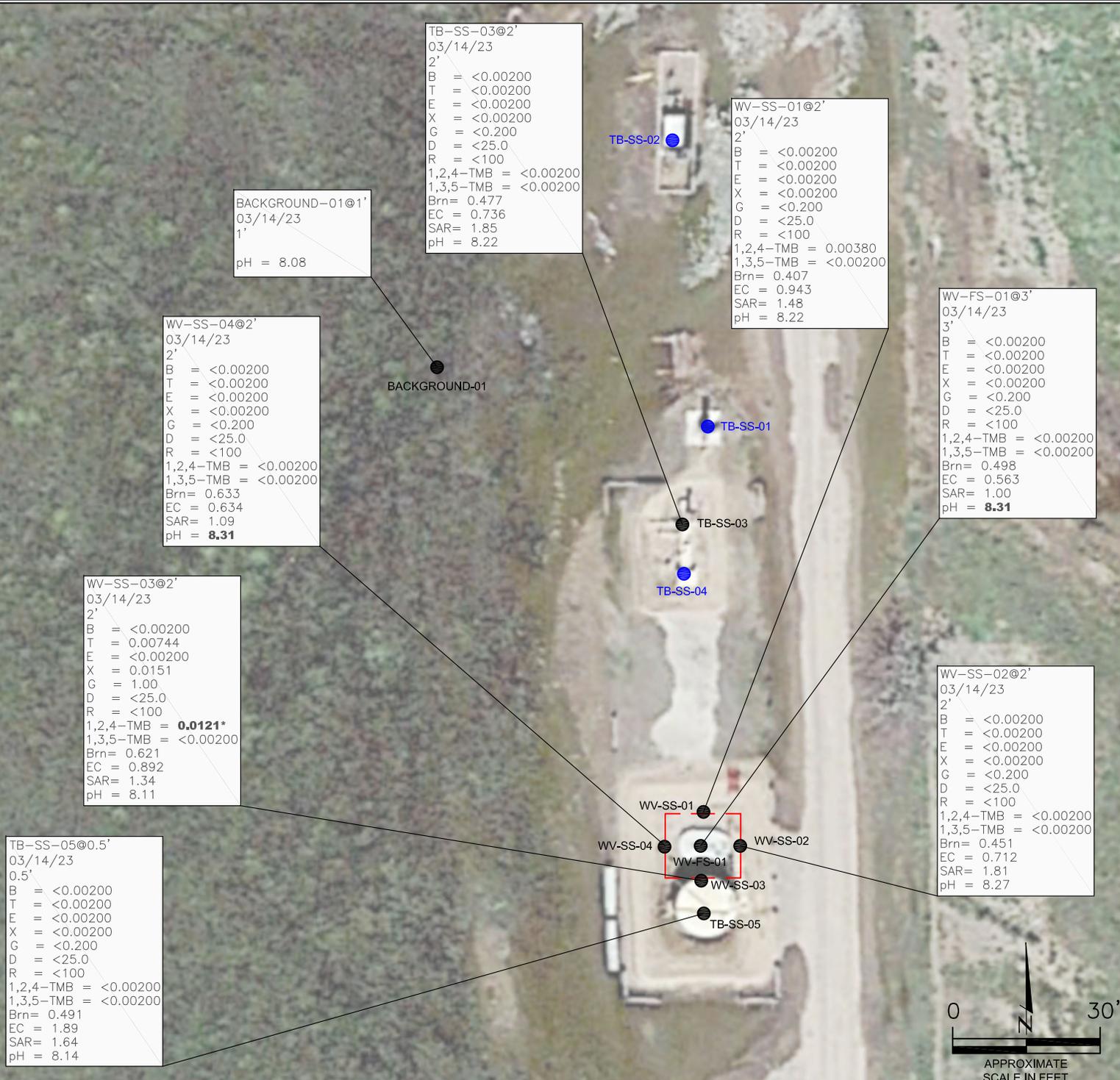
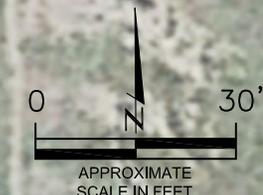
**SOIL ANALYTICAL MAP**  
 LOUSTELET T5N-R64W-S15 L01 TANK BATTERY  
 CLOSURE ASSESSMENT  
 40.395146 / -104.536147  
 SE¼ SW¼ SEC.15 T5N R64W 6PM  
 WELD COUNTY, COLORADO  
 LOCATION ID 447668  
 REMEDIATION # 23570

FIGURE NO.  
3

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**LEGEND**

- WATER VAULT ASSESSMENT BOUNDARIES
- 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 ECMC TABLE 915-1 REGULATORY LIMITS.

VALUES PRESENTED WITH AN ASTERISK (\*) EXCEED ECMC TABLE 915-1 GROUNDWATER SOIL SCREENING LEVELS, ONLY.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

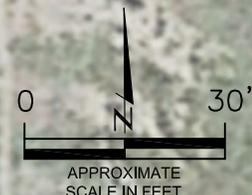
POLYCYCLIC AROMATIC HYDROCARBONS MAP  
 LOUSTELET T5N-R64W-S15 L01 TANK BATTERY  
 CLOSURE ASSESSMENT  
 40.395146 / -104.536147  
 SE¼ SW¼ SEC.15 T5N R64W 6PM  
 WELD COUNTY, COLORADO  
 LOCATION ID 447668  
 REMEDIATION # 23570

FIGURE NO.  
4

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TB-SS-03@2'  
 03/14/23  
 2'

1-Methylnaphthalene = <0.00201  
 2-Methylnaphthalene = <0.00201  
 Acenaphthene = <0.00067  
 Anthracene = <0.00067  
 Benzo(a)anthracene = <0.00067  
 Benzo(a)pyrene = <0.00067  
 Benzo(b)fluoranthene = <0.00067  
 Benzo(k)fluoranthene = <0.00067  
 Chrysene = <0.00067  
 Dibenzo(a,h)anthracene = <0.00067  
 Fluoranthene = <0.00067  
 Fluorene = <0.00067  
 Indeno(1,2,3-CD)pyrene = <0.00067  
 Naphthalene = <0.00201  
 Pyrene = <0.00067

WV-SS-01@2'  
 03/14/23  
 2'

1-Methylnaphthalene = 0.00246  
 2-Methylnaphthalene = 0.00263  
 Acenaphthene = 0.00071  
 Anthracene = <0.00067  
 Benzo(a)anthracene = 0.00064  
 Benzo(a)pyrene = 0.000931  
 Benzo(b)fluoranthene = <0.00067  
 Benzo(k)fluoranthene = <0.00067  
 Chrysene = 0.00174  
 Dibenzo(a,h)anthracene = <0.00067  
 Fluoranthene = <0.00067  
 Fluorene = 0.00357  
 Indeno(1,2,3-CD)pyrene = <0.00067  
 Naphthalene = <0.00201  
 Pyrene = 0.00142

WV-FS-01@3'  
 03/14/23  
 3'

1-Methylnaphthalene = <0.00201  
 2-Methylnaphthalene = <0.00201  
 Acenaphthene = <0.00067  
 Anthracene = 0.000633  
 Benzo(a)anthracene = <0.00067  
 Benzo(a)pyrene = 0.000874  
 Benzo(b)fluoranthene = <0.00067  
 Benzo(k)fluoranthene = <0.00067  
 Chrysene = 0.00247  
 Dibenzo(a,h)anthracene = <0.00067  
 Fluoranthene = <0.00067  
 Fluorene = 0.00227  
 Indeno(1,2,3-CD)pyrene = <0.00067  
 Naphthalene = <0.00201  
 Pyrene = 0.00142

WV-SS-04@2'  
 03/14/23  
 2'

1-Methylnaphthalene = <0.00201  
 2-Methylnaphthalene = <0.00201  
 Acenaphthene = <0.00067  
 Anthracene = <0.00067  
 Benzo(a)anthracene = 0.000986  
 Benzo(a)pyrene = 0.000487  
 Benzo(b)fluoranthene = <0.00067  
 Benzo(k)fluoranthene = <0.00067  
 Chrysene = 0.000725  
 Dibenzo(a,h)anthracene = <0.00067  
 Fluoranthene = <0.00067  
 Fluorene = 0.000899  
 Indeno(1,2,3-CD)pyrene = <0.00067  
 Naphthalene = <0.00201  
 Pyrene = 0.000649

WV-SS-03@2'  
 03/14/23  
 2'

1-Methylnaphthalene = <0.00201  
 2-Methylnaphthalene = <0.00201  
 Acenaphthene = <0.00067  
 Anthracene = <0.00067  
 Benzo(a)anthracene = 0.000597  
 Benzo(a)pyrene = 0.00157  
 Benzo(b)fluoranthene = 0.000988  
 Benzo(k)fluoranthene = 0.000751  
 Chrysene = 0.00127  
 Dibenzo(a,h)anthracene = <0.00067  
 Fluoranthene = 0.00138  
 Fluorene = <0.00067  
 Indeno(1,2,3-CD)pyrene = 0.000956  
 Naphthalene = <0.00201  
 Pyrene = 0.00158

TB-SS-05@0.5'  
 03/14/23  
 0.5'

1-Methylnaphthalene = <0.00201  
 2-Methylnaphthalene = <0.00201  
 Acenaphthene = <0.00067  
 Anthracene = 0.000767  
 Benzo(a)anthracene = **0.0135\***  
 Benzo(a)pyrene = 0.0142  
 Benzo(b)fluoranthene = 0.0107  
 Benzo(k)fluoranthene = 0.00781  
 Chrysene = 0.0172  
 Dibenzo(a,h)anthracene = 0.00289  
 Fluoranthene = 0.0295  
 Fluorene = <0.00067  
 Indeno(1,2,3-CD)pyrene = 0.00861  
 Naphthalene = <0.00201  
 Pyrene = 0.0269

WV-SS-02@2'  
 03/14/23  
 2'

1-Methylnaphthalene = <0.00201  
 2-Methylnaphthalene = <0.00201  
 Acenaphthene = <0.00067  
 Anthracene = <0.00067  
 Benzo(a)anthracene = 0.00652  
 Benzo(a)pyrene = 0.00672  
 Benzo(b)fluoranthene = 0.00479  
 Benzo(k)fluoranthene = 0.00415  
 Chrysene = 0.0082  
 Dibenzo(a,h)anthracene = 0.00142  
 Fluoranthene = 0.0135  
 Fluorene = <0.00067  
 Indeno(1,2,3-CD)pyrene = 0.00378  
 Naphthalene = <0.00201  
 Pyrene = 0.013

WV-SS-01  
 WV-SS-02  
 WV-SS-03  
 WV-SS-04  
 WV-FS-01  
 TB-SS-05

SS-02

TB-SS-01

TB-SS-03

TB-SS-04

WV-SS-01

WV-SS-04

WV-SS-02

WV-SS-03

TB-SS-05

BACKGROUND-01@1'  
03/14/23  
1'

Arsenic = 2.45  
Barium = 71.8  
Cadmium = 0.211  
Copper = 10.1  
Lead = 10.4  
Nickel = <9.07  
Selenium = 0.226  
Silver = 0.108  
Zinc = <90.7

BACKGROUND-01

TB-SS-02

TB-SS-01

TB-SS-03  
(NS)

TB-SS-04

TB-SS-05@0.5'  
03/14/23  
0.5'

Arsenic = **3.22**  
Barium = 70.3  
Cadmium = 0.135  
Chromium (VI) = <0.497\*\*  
Copper = <8.57  
Lead = <8.57  
Nickel = <8.57  
Selenium = 0.143  
Silver = <0.0857  
Zinc = <85.7

(NS)  
WV-SS-01

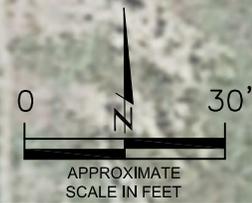
(NS) WV-SS-02

(NS) WV-SS-04

(NS) WV-FS-01

(NS) WV-SS-03

TB-SS-05



LEGEND

- WATER VAULT ASSESSMENT BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

PARAMETERS

SAMPLE LOCATION  
DATE SAMPLE COLLECTED  
APPROXIMATE DEPTH  
Arsenic = (mg/kg)  
Barium = (mg/kg)  
Cadmium = (mg/kg)  
Chromium (VI) = (mg/kg)  
Copper = (mg/kg)  
Lead = (mg/kg)  
Nickel = (mg/kg)  
Selenium = (mg/kg)  
Silver = (mg/kg)  
Zinc = (mg/kg)

mg/kg = MILLIGRAMS PER KILOGRAM

(NS) = NOT SAMPLED

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

ELEVATED METALS ARE NATURALLY OCCURRING IN COLORADO. LOCAL CLEAN-UP LEVELS ARE 1.25\*BACKGROUND CONCENTRATIONS WHERE APPLICABLE.

VALUES PRESENTED IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS AND APPLICABLE LOCAL CLEAN-UP LEVELS.

\*VALUES EXCEED ECMC TABLE 915-1 PROTECTION OF GROUNDWATER SOIL SCREENING LEVELS, ONLY.

\*\*ACHIEVABLE PRACTICAL QUANTITATIVE LIMITS FOR HEXAVALENT CHROMIUM (Cr VI) IN SOILS IS IN THE RANGE OF 0.1 TO 1 mg/kg.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

METALS IN SOIL MAP  
LOUSTELET T5N-R64W-S15 L01 TANK BATTERY  
CLOSURE ASSESSMENT  
40.395146 / -104.536147  
SE¼ SW¼ SEC.15 T5N R64W 6PM  
WELD COUNTY, COLORADO  
LOCATION ID 447668  
REMEDATION # 23570

FIGURE NO.  
5

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## **TABLES**

**Table 1: Photoionization Detector Reading Summary**

**Table 2: Soil Analytical Results Summary**

**TABLE 1**  
**PHOTOIONIZATION DETECTOR READING SUMMARY**  
**LOUSTELET T5N-R64W-S15 L01 TANK BATTERY**  
**CLOSURE ASSESSMENT**  
**40.395146 / -104.536147**  
**SE¼ SW¼ SEC.15 T5N R64W 6PM**  
**WELD COUNTY, COLORADO**  
**LOCATION ID 447668**  
**REMEDIATION # 23570**

<b>Sample Location</b> (Latitude/Longitude)	<b>Date</b>	<b>Approximate Depth</b> (feet)	<b>PID Reading</b> (ppm-v)	<b>Lab Submission</b> (Y/N)
TB-SS-01 @ 0.5' (40.395298 / -104.536134)	03/14/23	0.5	0.8	N
TB-SS-02 @ 0.5' (40.395465 / -104.536154)	03/14/23	0.5	1.0	N
TB-SS-03 @ 2' (40.395251 / -104.536151)	03/14/23	2	1.7	Y
TB-SS-04 @ 2' (40.395224 / -104.536148)	03/14/23	2	1.3	N
TB-SS-05 @ 0.5' (40.395032 / -104.536136)	03/14/23	0.5	1.5	Y
WV-SS-01 @ 2' (40.395095 / -104.536139)	03/14/23	2	1.9	Y
WV-SS-02 @ 2' (40.395075 / -104.536111)	03/14/23	2	2.8	Y
WV-SS-03 @ 2' (40.395055 / -104.536136)	03/14/23	2	89.8	Y
WV-SS-04 @ 2' (40.395076 / -104.536162)	03/14/23	2	3.9	Y
WV-FS-01 @ 3' (40.395074 / -104.536137)	03/14/23	3	68.5	Y
Background-01 @ 1' (40.395341 / -104.536350)	03/14/23	1	0.9	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				



TABLE 2  
SOIL ANALYTICAL RESULTS SUMMARY  
LOUSTELET T5N-R64W-S15 L01 TANK BATTERY  
CLOSURE ASSESSMENT  
40.395146 / -104.536147  
SE¼ SW¼ SEC.15 T5N R64W 6PM  
WELD COUNTY, COLORADO  
LOCATION ID 447668  
REMEDATION # 23570

Sample Location		TB-SS-03 @ 2'		TB-SS-05 @ 0.5'		WV-SS-01 @ 2'		WV-SS-02 @ 2'	
(Latitude / Longitude)		(40.395251 / -104.536151)		(40.395032 / -104.536136)		(40.395095 / -104.536139)		(40.395075 / -104.536111)	
Sample Date		3/14/2023		3/14/2023		3/14/2023		3/14/2023	
Sample Depth		2'		0.5'		2'		2'	
PID Reading (ppm-v)		1.7		1.5		1.9		2.8	
Regulatory Limits									
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	Local Clean-Up Level					
VOLATILE ORGANIC COMPOUNDS									
Benzene	mg/kg	1.2	0.0026	--	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Toluene	mg/kg	490	0.69	--	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Ethylbenzene	mg/kg	5.8	0.78	--	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
Total Xylenes	mg/kg	58	9.9	--	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	--	<0.00200	<0.00200	0.0038	<0.00200	<0.00200
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	--	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200
TOTAL PETROLEUM HYDROCARBONS									
TPH-GRO	mg/kg	500	--	--	<0.200	<0.200	<0.200	<0.200	<0.200
TPH-DRO	mg/kg	500	--	--	<25.0	<25.0	<25.0	<25.0	<25.0
TPH-RRO	mg/kg	500	--	--	<100	<100	<100	<100	<100
POLYCYCLIC AROMATIC HYDROCARBONS									
1-Methyl-naphthalene	mg/kg	18	0.006	--	<0.00201	<0.00201	0.00246	<0.00201	<0.00201
2-Methyl-naphthalene	mg/kg	24	0.019	--	<0.00201	<0.00201	0.00263	<0.00201	<0.00201
Acenaphthene	mg/kg	360	0.55	--	<0.00067	<0.00067	0.00071	<0.00067	<0.00067
Anthracene	mg/kg	1800	5.8	--	<0.00067	0.000767	<0.00067	<0.00067	<0.00067
Benzo(a)-anthracene	mg/kg	1.1	0.011	--	<0.00067	<b>0.0135*</b>	0.00064	0.00652	0.00652
Benzo(a)-pyrene	mg/kg	0.11	0.24	--	<0.00067	0.0142	0.000931	0.00672	0.00672
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	--	<0.00067	0.0107	<0.00067	0.00479	0.00479
Benzo(k)-fluoranthene	mg/kg	11	2.9	--	<0.00067	0.00781	<0.00067	0.00415	0.00415
Chrysene	mg/kg	110	9	--	<0.00067	0.0172	0.00174	0.0082	0.0082
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	--	<0.00067	0.00289	<0.00067	0.00142	0.00142
Fluoranthene	mg/kg	240	8.9	--	<0.00067	0.0295	<0.00067	0.0135	0.0135
Fluorene	mg/kg	240	0.54	--	<0.00067	<0.00067	0.00357	<0.00067	<0.00067
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	--	<0.00067	0.00861	<0.00067	0.00378	0.00378
Naphthalene	mg/kg	2	0.0038	--	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201
Pyrene	mg/kg	180	1.3	--	<0.00067	0.0269	0.00142	0.013	0.013
SOIL SUITABILITY (Inorganics)									
Boron	mg/L	2	--	--	0.477	0.491	0.407	0.451	0.451
pH	standard unit	6-8.3	--	--	8.22	8.14	8.22	8.27	8.27
Sodium Adsorption Ratio (SAR)	--	<6	--	--	1.85	1.64	1.48	1.81	1.81
Specific Conductance (EC)	mmhos/cm	<4	--	--	0.736	1.890	0.943	0.712	0.712
METALS									
Arsenic	mg/kg	0.68***	0.29***	3.06	NA	<b>3.22***</b>	NA	NA	NA
Barium	mg/kg	15000	82	--	NA	70.3	NA	NA	NA
Cadmium	mg/kg	71	0.38	--	NA	0.135	NA	NA	NA
Copper	mg/kg	3100	46	--	NA	<8.57	NA	NA	NA
Lead	mg/kg	400	14	--	NA	<8.57	NA	NA	NA
Nickel	mg/kg	1500	26	--	NA	<8.57	NA	NA	NA
Selenium	mg/kg	390	0.26	--	NA	0.143	NA	NA	NA
Silver	mg/kg	390	0.8	--	NA	<0.0857	NA	NA	NA
Zinc	mg/kg	23000	370	--	NA	<85.7	NA	NA	NA
Hexavalent Chromium	mg/kg	0.3**	0.00067**	0.1 to 1.0**	NA	<0.497**	NA	NA	NA
ECMC = Energy & Carbon Management 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 NA = Not Analyzed 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 Notes: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit. Elevated metals are naturally occurring in Colorado. Local Clean-up Levels are 1.25*Background concentrations where applicable. Values presented in <b>BOLD</b> exceed ECMC Table 915-1 Regulatory Limits and applicable Local Clean-up Levels. Values presented with asterisk (*) exceed ECMC Table 915-1 GSSLs, only. **Achievable practical quantitative limits for Hexavalent Chromium in soils is in the range of 0.1 to 1 mg/kg.									

TABLE 2  
SOIL ANALYTICAL RESULTS SUMMARY  
LOUSTELET T5N-R64W-S15 L01 TANK BATTERY  
CLOSURE ASSESSMENT  
40.395146 / -104.536147  
SE¼ SW¼ SEC.15 T5N R64W 6PM  
WELD COUNTY, COLORADO  
LOCATION ID 447668  
REMEDATION # 23570

Sample Location		WV-SS-03 @ 2'	WV-SS-04 @ 2'	WV-FS-01 @ 3'	Background-01 @ 1'				
(Latitude / Longitude)		(40.395055 / -104.536136)	(40.395076 / -104.536162)	(40.395074 / -104.536137)	(40.395341 / -104.536350)				
Sample Date		3/14/2023	3/14/2023	3/14/2023	3/14/2023				
Sample Depth		2'	2'	3'	1'				
PID Reading (ppm-v)		89.9	3.9	68.5	0.9				
Regulatory Limits									
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	Local Clean-Up Level					
VOLATILE ORGANIC COMPOUNDS									
Benzene	mg/kg	1.2	0.0026	--	<0.00200	<0.00200	<0.00200	<0.00200	NA
Toluene	mg/kg	490	0.69	--	0.00744	<0.00200	<0.00200	<0.00200	NA
Ethylbenzene	mg/kg	5.8	0.78	--	<0.00200	<0.00200	<0.00200	<0.00200	NA
Total Xylenes	mg/kg	58	9.9	--	0.0151	<0.00200	<0.00200	<0.00200	NA
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	--	<b>0.0121*</b>	<0.00200	<0.00200	<0.00200	NA
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	--	<0.00200	<0.00200	<0.00200	<0.00200	NA
TOTAL PETROLEUM HYDROCARBONS									
TPH-GRO	mg/kg	500	--	--	1.00	<0.200	<0.200	<0.200	NA
TPH-DRO	mg/kg	500	--	--	<25.0	<25.0	<25.0	<25.0	NA
TPH-RRO	mg/kg	500	--	--	<100	<100	<100	<100	NA
POLYCYCLIC AROMATIC HYDROCARBONS									
1-Methyl-naphthalene	mg/kg	18	0.006	--	<0.00201	<0.00201	<0.00201	<0.00201	NA
2-Methyl-naphthalene	mg/kg	24	0.019	--	<0.00201	<0.00201	<0.00201	<0.00201	NA
Acenaphthene	mg/kg	360	0.55	--	<0.00067	<0.00067	<0.00067	<0.00067	NA
Anthracene	mg/kg	1800	5.8	--	<0.00067	<0.00067	0.000633	<0.00067	NA
Benzo(a)-anthracene	mg/kg	1.1	0.011	--	0.000597	0.000986	<0.00067	<0.00067	NA
Benzo(a)-pyrene	mg/kg	0.11	0.24	--	0.00157	0.000487	0.000874	<0.00067	NA
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	--	0.000988	<0.00067	<0.00067	<0.00067	NA
Benzo(k)-fluoranthene	mg/kg	11	2.9	--	0.000751	<0.00067	<0.00067	<0.00067	NA
Chrysene	mg/kg	110	9	--	0.00127	0.000725	0.00247	<0.00067	NA
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	--	<0.00067	<0.00067	<0.00067	<0.00067	NA
Fluoranthene	mg/kg	240	8.9	--	0.00138	<0.00067	<0.00067	<0.00067	NA
Fluorene	mg/kg	240	0.54	--	<0.00067	0.000899	0.00227	<0.00067	NA
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	--	0.000956	<0.00067	<0.00067	<0.00067	NA
Naphthalene	mg/kg	2	0.0038	--	<0.00201	<0.00201	<0.00201	<0.00201	NA
Pyrene	mg/kg	180	1.3	--	0.00158	0.000649	0.00142	<0.00067	NA
SOIL SUITABILITY (Inorganics)									
Boron	mg/L	2	--	--	0.621	0.633	0.498	<0.00067	NA
pH	standard unit	6-8.3	--	--	8.11	<b>8.31</b>	<b>8.31</b>	8.08	8.08
Sodium Adsorption Ratio (SAR)	--	<6	--	--	1.34	1.09	1.00	<0.00067	NA
Specific Conductance (EC)	mmhos/cm	<4	--	--	0.892	0.634	0.563	<0.00067	NA
METALS									
Arsenic	mg/kg	0.68***	0.29***	3.06	NA	NA	NA	NA	2.45
Barium	mg/kg	15000	82	--	NA	NA	NA	NA	71.8
Cadmium	mg/kg	71	0.38	--	NA	NA	NA	NA	0.211
Copper	mg/kg	3100	46	--	NA	NA	NA	NA	10.1
Lead	mg/kg	400	14	--	NA	NA	NA	NA	10.4
Nickel	mg/kg	1500	26	--	NA	NA	NA	NA	<9.07
Selenium	mg/kg	390	0.26	--	NA	NA	NA	NA	0.226
Silver	mg/kg	390	0.8	--	NA	NA	NA	NA	0.108
Zinc	mg/kg	23000	370	--	NA	NA	NA	NA	<90.7
Hexavalent Chromium	mg/kg	0.3**	0.00067**	0.1 to 1.0**	NA	NA	NA	NA	NA
ECMC = Energy & Carbon Management 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 NA = Not Analyzed Notes: Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit. Elevated metals are naturally occurring in Colorado. Local Clean-up Levels are 1.25*Background concentrations where applicable. Values presented in <b>BOLD</b> exceed ECMC Table 915-1 Regulatory Limits and applicable Local Clean-up Levels. Values presented with asterisk (*) exceed ECMC Table 915-1 GSSLs, only. **Achievable practical quantitative limits for Hexavalent Chromium in soils is in the range of 0.1 to 1 mg/kg.									



## **ATTACHMENT A**

### **Photo Log**

# Loustelet T5N-R64W-S15 L01 Tank Battery

Location ID 447668

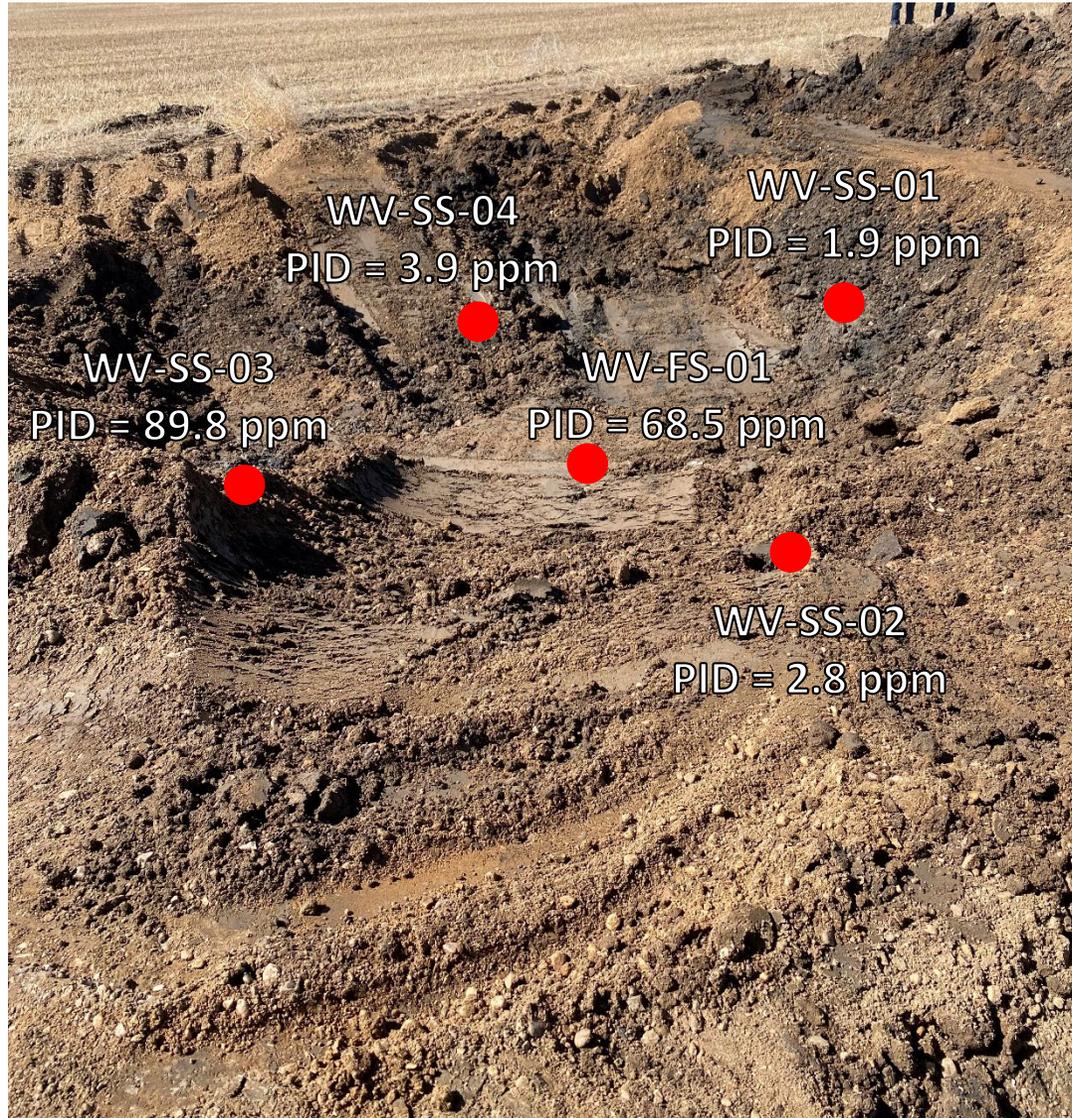
Remediation # 23570

Closure Assessment

March 2023



# Water Vault Excavation – 03/14/23



Looking northwest

Black staining and slight petroleum hydrocarbon odor observed

# Tank Battery Decommissioning – 03/14/23



Looking west at former VOC burner footprint

No petroleum hydrocarbon staining or odor observed



Looking west at former meter house connection

No petroleum hydrocarbon staining or odor observed

# Tank Battery Decommissioning – 03/14/23



Looking south at flowline to separator connection

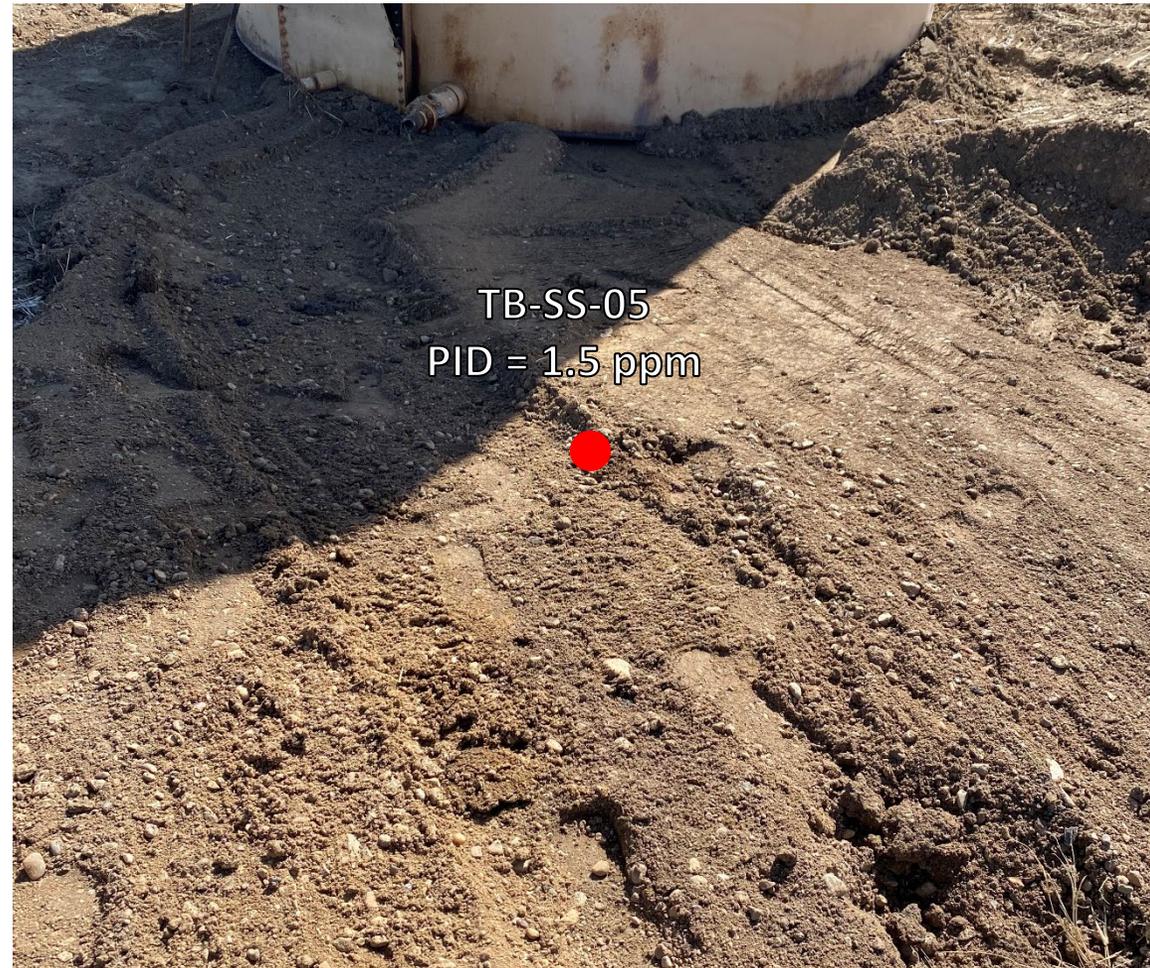
No petroleum hydrocarbon staining or odor observed



Looking south at dumpline to separator connection

No petroleum hydrocarbon staining or odor observed

# Tank Battery Decommissioning – 03/14/23



Looking south at former production tank footprint

No petroleum hydrocarbon staining or odor observed



## **ATTACHMENT B**

### **Laboratory Analytical Reports**

March 29, 2023

Eagle Environmental Consulting, LLC

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

**Project Name - Noble - Loustelet T5N-R64W-S15 L01**      **Project Number - [none]**

Attached are your analytical results for Noble - Loustelet T5N-R64W-S15 L01 received by Origins Laboratory, Inc. March 14, 2023. This project is associated with Origins project number Y303346-01.

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



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB-SS-03@2'	Y303346-01	Soil	March 14, 2023 12:00	03/14/2023 16:12
TB-SS-05@0.5'	Y303346-02	Soil	March 14, 2023 14:20	03/14/2023 16:12
WV-SS-01@2'	Y303346-03	Soil	March 14, 2023 14:22	03/14/2023 16:12
WV-SS-02@2'	Y303346-04	Soil	March 14, 2023 14:24	03/14/2023 16:12
WV-SS-03@2'	Y303346-05	Soil	March 14, 2023 14:26	03/14/2023 16:12
WV-SS-04@2'	Y303346-06	Soil	March 14, 2023 14:28	03/14/2023 16:12
WV-FS-01@3'	Y303346-07	Soil	March 14, 2023 14:30	03/14/2023 16:12

Chain of Custody Modification Request

On 3/23/2023, Grace Congdon from Eagle Environmental contacted Jordan Bynon via email regarding Y303346 requesting that Table 915 Metals be added to TB-SS-05@.5'.

Requested modifications to the chain of custody were made by Jordan Bynon on 3/23/2023.

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, LLC  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 4303346

Client: Eagle

Client Project ID: Loustelet T5N-1664W

Checklist Completed by: EHS

Shipped Via: HO S15 L01

Date/time completed: 3/14/23

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

Airbill #: NA

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

Cooler Number/Temperature: 1 5.5 °c / \_\_\_\_\_ °c / \_\_\_\_\_ °c (Describe) \_\_\_\_\_ °c

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> ?	<input checked="" type="checkbox"/>			
Is there ice present (document if blue ice is used)	<input checked="" type="checkbox"/>			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)		<input checked="" type="checkbox"/>		
Were all samples received intact <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	<input checked="" type="checkbox"/>			
For volatiles in water – is there headspace (> ¼ inch bubble) present? <b>If yes, contact client and note in narrative.</b>			<input checked="" type="checkbox"/>	
Are samples preserved that require preservation and was it checked <sup>(1)</sup> ? (note ID of confirmation instrument used in comments) / (preservation is not confirmed for subcontracted analyses in order to insure sample integrity)/(pH <2 for samples preserved with HNO3, HCL, H2SO4) / (pH >10 for samples preserved with NaAsO2+NaOH, ZnAc+NaOH)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

Reviewed by (Project Manager) [Signature] Date/Time Reviewed 3/15/23

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, LLC  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**TB-SS-03@2'**  
**3/14/2023 12:00:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.477		0.100	mg/L	1	B3C1606	03/16/2023	03/17/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3C1501	03/15/2023	03/16/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	86.3 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3C1426	03/14/2023	03/15/2023	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	99.0 %		70-130			"	"	"	
----------------------------------	--------	--	--------	--	--	---	---	---	--

Origins Laboratory, Inc.



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

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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**TB-SS-03@2'**  
**3/14/2023 12:00:00PM**

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

**Origins Laboratory, Inc.**  
**Y303346-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	88.5 %		70-130			B3C14 26	03/14/2023	03/15/2023	
Surrogate: 4-Bromofluorobenzene	108 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	3.49		0.499	meq/L	10	[CALC]	03/16/2023	03/20/2023	
Magnesium	1.21		0.823	"	"	"	"	"	
Sodium	2.83		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
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, LLC  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**TB-SS-03@2'**

**3/14/2023 12:00:00PM**

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

**Waypoint Analytical, LLC.**  
**Y303346-01 (Soil)**

**PAH by 8270D SIM**

Fluorene	ND	0.000286	0.00067	mg/Kg	1	L670656	03/18/2023	03/19/2023	
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	49.8 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	57.4 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	50.2 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.22			pH Units	1	B3C1612	03/16/2023	03/17/2023	
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**SAR by 20B Saturated Paste**

SAR	1.85			SAR	1	B3C1609	03/16/2023	03/20/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.736		0.00500	mmhos/cm	1	B3C1612	03/16/2023	03/17/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**TB-SS-05@0.5'**  
**3/14/2023 2:20:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.491		0.0999	mg/L	1	B3C1606	03/16/2023	03/17/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3C1501	03/15/2023	03/16/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	90.5 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3C1426	03/14/2023	03/15/2023	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	107 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**TB-SS-05@0.5'**  
**3/14/2023 2:20:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-02 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	99.7 %		70-130			B3C14 26	03/14/2023	03/15/2023	
Surrogate: 4-Bromofluorobenzene	110 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	14.2		0.499	meq/L	10	[CALC]	03/16/2023	03/20/2023	
Magnesium	4.72		0.823	"	"	"	"	"	
Sodium	5.05		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	0.000767	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	0.0135	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.0142	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	0.0107	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	0.00781	0.000437	0.00067	"	"	"	"	"	
Chrysene	0.0172	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	0.00289	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.0295	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**TB-SS-05@0.5'**  
**3/14/2023 2:20:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y303346-02 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	0.00861	0.000627	0.00067	mg/Kg	1	L670656	03/18/2023	03/19/2023	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	0.0269	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	52.9 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	59.1 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	52.9 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.14			pH Units	1	B3C1612	03/16/2023	03/17/2023	
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**SAR by 20B Saturated Paste**

SAR	1.64			SAR	1	B3C1609	03/16/2023	03/20/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	1.89		0.00500	mmhos/cm	1	B3C1612	03/16/2023	03/17/2023	
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**Table 915 metals by EPA 6020B**

Arsenic	3.22		0.0857	mg/kg	10	B3C2419	03/24/2023	03/28/2023	
Barium	70.3		8.57	"	"	"	"	"	

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**TB-SS-05@0.5'**  
**3/14/2023 2:20:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-02 (Soil)**

**Table 915 metals by EPA 6020B**

Cadmium	0.135		0.0857	mg/kg	10	B3C2419	03/24/2023	03/28/2023	
Copper	ND		8.57	"	"	"	"	"	
Lead	ND		8.57	"	"	"	"	"	
Nickel	ND		8.57	"	"	"	"	"	
Selenium	0.143		0.0857	"	"	"	"	"	
Silver	ND		0.0857	"	"	"	"	"	
Zinc	ND		85.7	"	"	"	"	"	

**Total Metals by 7196A**

Chromium, Hexavalent	ND	0.497	1.02	mg/Kg	1	L672583	03/14/2023	03/28/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-01@2'**  
**3/14/2023 2:22:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-03 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.407		0.100	mg/L	1	B3C1606	03/16/2023	03/17/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3C1501	03/15/2023	03/16/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: <i>o</i> -Terphenyl	87.8 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	0.00380		0.00200	mg/kg	1	B3C1426	03/14/2023	03/15/2023	
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	89.2 %		70-130			"	"	"	
Surrogate: Toluene-d8	100 %		70-130			"	"	"	

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-01@2'**  
**3/14/2023 2:22:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-03 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene	109 %		70-130			B3C14 26	03/14/2023	03/15/2023	
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**Metals by Saturated Paste by EPA 6010**

Calcium	5.35		0.499	meq/L	10	[CALC]	03/16/2023	03/20/2023	
Magnesium	2.11		0.823	"	"	"	"	"	
Sodium	2.86		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	0.00246	0.00109	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
2-Methylnaphthalene	0.00263	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	0.00071	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	0.00064	0.000493	0.00067	"	"	"	"	"	J
Benzo(a)pyrene	0.000931	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	0.00174	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	0.00357	0.000286	0.00067	"	"	"	"	"	
Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-01@2'**  
**3/14/2023 2:22:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y303346-03 (Soil)**

**PAH by 8270D SIM**

Naphthalene	ND	0.00145	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
Pyrene	<b>0.00142</b>	<b>0.000643</b>	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	52 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	62.5 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	55.6 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	<b>8.22</b>			pH Units	1	B3C1612	03/16/2023	03/17/2023	
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**SAR by 20B Saturated Paste**

SAR	<b>1.48</b>			SAR	1	B3C1609	03/16/2023	03/20/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	<b>0.943</b>		0.00500	mmhos/cm	1	B3C1612	03/16/2023	03/17/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-02@2'**  
**3/14/2023 2:24:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.451		0.0999	mg/L	1	B3C1606	03/16/2023	03/17/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3C1501	03/15/2023	03/16/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	89.7 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3C1426	03/14/2023	03/15/2023	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	105 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-02@2'**  
**3/14/2023 2:24:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-04 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	100 %		70-130			B3C14 26	03/14/2023	03/15/2023	
Surrogate: 4-Bromofluorobenzene	98.5 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	3.21		0.499	meq/L	10	[CALC]	03/16/2023	03/20/2023	
Magnesium	1.22		0.823	"	"	"	"	"	
Sodium	2.70		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	0.00652	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	0.00672	0.000468	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	0.00479	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	0.00415	0.000437	0.00067	"	"	"	"	"	
Chrysene	0.0082	0.000624	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	0.00142	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	0.0135	0.000394	0.00067	"	"	"	"	"	
Fluorene	ND	0.000286	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-02@2'**  
**3/14/2023 2:24:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y303346-04 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	0.00378	0.000627	0.00067	mg/Kg	1	L670656	03/18/2023	03/19/2023	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	0.013	0.000643	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	55 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	63.3 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	52.9 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	8.27			pH Units	1	B3C1612	03/16/2023	03/17/2023	
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**SAR by 20B Saturated Paste**

SAR	1.81			SAR	1	B3C1609	03/16/2023	03/20/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.712		0.00500	mmhos/cm	1	B3C1612	03/16/2023	03/17/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-03@2'**  
**3/14/2023 2:26:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.621		0.0999	mg/L	1	B3C1606	03/16/2023	03/17/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3C1501	03/15/2023	03/16/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	83.7 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	0.0121		0.00200	mg/kg	1	B3C1426	03/14/2023	03/15/2023	
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	U
Benzene	ND		0.00200	"	"	"	"	"	U
Ethylbenzene	ND		0.00200	"	"	"	"	"	U
Toluene	0.00744		0.00200	"	"	"	"	"	
Xylenes, total	0.0151		0.00200	"	"	"	"	"	
Gasoline Range Hydrocarbons	1.00		0.200	"	"	"	"	"	

Surrogate: 1,2-Dichloroethane-d4	103 %		70-130			"	"	"	
Surrogate: Toluene-d8	90.4 %		70-130			"	"	"	

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-03@2'**  
**3/14/2023 2:26:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-05 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 4-Bromofluorobenzene    115 %    70-130    B3C14 26    03/14/2023    03/15/2023

**Metals by Saturated Paste by EPA 6010**

Calcium	4.29	0.499	meq/L	10	[CALC]	03/16/2023	03/20/2023
Magnesium	2.51	0.823	"	"	"	"	"
Sodium	2.47	0.435	"	"	"	"	"

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"
Anthracene	ND	0.000334	0.00067	"	"	"	"	"
Benzo(a)anthracene	0.000597	0.000493	0.00067	"	"	"	"	"
Benzo(a)pyrene	0.00157	0.000468	0.00067	"	"	"	"	"
Benzo(b)fluoranthene	0.000988	0.000585	0.00067	"	"	"	"	"
Benzo(k)fluoranthene	0.000751	0.000437	0.00067	"	"	"	"	"
Chrysene	0.00127	0.000624	0.00067	"	"	"	"	"
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"
Fluoranthene	0.00138	0.000394	0.00067	"	"	"	"	"
Fluorene	ND	0.000286	0.00067	"	"	"	"	"
Indeno(1,2,3-cd)pyrene	0.000956	0.000627	0.00067	"	"	"	"	"

Origins Laboratory, Inc.



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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-03@2'**

**3/14/2023 2:26:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y303346-05 (Soil)**

**PAH by 8270D SIM**

Naphthalene	ND	0.00145	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
Pyrene	<b>0.00158</b>	<b>0.000643</b>	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	47.4 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	56.8 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	48.9 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	<b>8.11</b>			pH Units	1	B3C1612	03/16/2023	03/17/2023	
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**SAR by 20B Saturated Paste**

SAR	<b>1.34</b>			SAR	1	B3C1609	03/16/2023	03/20/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	<b>0.892</b>		0.00500	mmhos/cm	1	B3C1612	03/16/2023	03/17/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-04@2'**  
**3/14/2023 2:28:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-06 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.633		0.0999	mg/L	1	B3C1606	03/16/2023	03/17/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3C1501	03/15/2023	03/16/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	83.8 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3C1426	03/14/2023	03/15/2023	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	101 %		70-130			"	"	"	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-04@2'**

**3/14/2023 2:28:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-06 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	103 %		70-130			B3C14 26	03/14/2023	03/15/2023	
Surrogate: 4-Bromofluorobenzene	117 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>2.95</b>		0.499	meq/L	10	[CALC]	03/16/2023	03/20/2023	
Magnesium	<b>1.96</b>		0.823	"	"	"	"	"	
Sodium	<b>1.71</b>		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	ND	0.000334	0.00067	"	"	"	"	"	
Benzo(a)anthracene	<b>0.000986</b>	<b>0.000493</b>	0.00067	"	"	"	"	"	
Benzo(a)pyrene	<b>0.000487</b>	<b>0.000468</b>	0.00067	"	"	"	"	"	J
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	<b>0.000725</b>	<b>0.000624</b>	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	<b>0.000899</b>	<b>0.000286</b>	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-SS-04@2'**  
**3/14/2023 2:28:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y303346-06 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	mg/Kg	1	L670656	03/18/2023	03/19/2023	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	<b>0.000649</b>	<b>0.000643</b>	0.00067	"	"	"	"	"	J

Surrogate: 2-Fluorobiphenyl	64.3 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	75.1 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	65.8 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	<b>8.31</b>			pH Units	1	B3C1612	03/16/2023	03/17/2023	
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**SAR by 20B Saturated Paste**

SAR	<b>1.09</b>			SAR	1	B3C1609	03/16/2023	03/20/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	<b>0.634</b>		0.00500	mmhos/cm	1	B3C1612	03/16/2023	03/17/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-FS-01@3'**  
**3/14/2023 2:30:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-07 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.498		0.100	mg/L	1	B3C1606	03/16/2023	03/17/2023	
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**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B3C1501	03/15/2023	03/16/2023	U
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	U

Surrogate: o-Terphenyl	89.1 %		50-150			"	"	"	
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**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B3C1426	03/14/2023	03/15/2023	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	101 %		70-130			"	"	"	
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Eagle Environmental Consulting, LLC  
 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-FS-01@3'**  
**3/14/2023 2:30:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303346-07 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: Toluene-d8	93.4 %		70-130			B3C14 26	03/14/2023	03/15/2023	
Surrogate: 4-Bromofluorobenzene	114 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	<b>2.68</b>		0.499	meq/L	10	[CALC]	03/16/2023	03/20/2023	
Magnesium	<b>2.17</b>		0.823	"	"	"	"	"	
Sodium	<b>1.57</b>		0.435	"	"	"	"	"	

**PAH by 8270D SIM**

1-Methylnaphthalene	ND	0.00109	0.00201	mg/Kg	1	L670656	03/18/2023	03/19/2023	
2-Methylnaphthalene	ND	0.00194	0.00201	"	"	"	"	"	
Acenaphthene	ND	0.000304	0.00067	"	"	"	"	"	
Anthracene	<b>0.000633</b>	<b>0.000334</b>	0.00067	"	"	"	"	"	J
Benzo(a)anthracene	ND	0.000493	0.00067	"	"	"	"	"	
Benzo(a)pyrene	<b>0.000874</b>	<b>0.000468</b>	0.00067	"	"	"	"	"	
Benzo(b)fluoranthene	ND	0.000585	0.00067	"	"	"	"	"	
Benzo(k)fluoranthene	ND	0.000437	0.00067	"	"	"	"	"	
Chrysene	<b>0.00247</b>	<b>0.000624</b>	0.00067	"	"	"	"	"	
Dibenz(a,h)anthracene	ND	0.000614	0.00067	"	"	"	"	"	
Fluoranthene	ND	0.000394	0.00067	"	"	"	"	"	
Fluorene	<b>0.00227</b>	<b>0.000286</b>	0.00067	"	"	"	"	"	

Origins Laboratory, Inc.



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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**WV-FS-01@3'**  
**3/14/2023 2:30:00PM**

Analyte	Result	Min Detection Limit	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Notes
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**Waypoint Analytical, LLC.**  
**Y303346-07 (Soil)**

**PAH by 8270D SIM**

Indeno(1,2,3-cd)pyrene	ND	0.000627	0.00067	mg/Kg	1	L670656	03/18/2023	03/19/2023	
Naphthalene	ND	0.00145	0.00201	"	"	"	"	"	
Pyrene	<b>0.00142</b>	<b>0.000643</b>	0.00067	"	"	"	"	"	

Surrogate: 2-Fluorobiphenyl	51.7 %		33-115			"	"	"	
Surrogate: 4-Terphenyl-d14	61.2 %		33-122			"	"	"	
Surrogate: Nitrobenzene-d5	48.9 %		29-110			"	"	"	

**pH in Soil by 9045D**

pH	<b>8.31</b>			pH Units	1	B3C1612	03/16/2023	03/17/2023	
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**SAR by 20B Saturated Paste**

SAR	<b>1.00</b>			SAR	1	B3C1609	03/16/2023	03/20/2023	
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**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	<b>0.563</b>		0.00500	mmhos/cm	1	B3C1612	03/16/2023	03/17/2023	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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
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**Batch B3C1426 - EPA 5030 (soil)**

**Blank (B3C1426-BLK1)**

Prepared: 03/14/2023 Analyzed: 03/14/2023

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	94.2		70-130			
Surrogate: Toluene-d8	0.13		"	0.125	101		70-130			
Surrogate: 4-Bromofluorobenzene	0.15		"	0.125	117		70-130			

Origins Laboratory, Inc.



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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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
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**Batch B3C1426 - EPA 5030 (soil)**

**LCS (B3C1426-BS1)**

Prepared: 03/14/2023 Analyzed: 03/14/2023

1,2,4-Trimethylbenzene	0.0995	0.00200	mg/kg	0.100		99.5	70-130			
1,3,5-Trimethylbenzene	0.102	0.00200	"	0.100		102	70-130			
Benzene	0.0866	0.00200	"	0.100		86.6	70-130			
Ethylbenzene	0.0952	0.00200	"	0.100		95.2	70-130			
Naphthalene	0.109	0.00380	"	0.100		109	70-130			
Toluene	0.0933	0.00200	"	0.100		93.3	70-130			
o-Xylene	0.0830	0.00200	"	0.100		83.0	70-130			
m,p-Xylene	0.190	0.00400	"	0.200		95.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		90.0	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		107	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		96.4	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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
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Batch B3C1426 - EPA 5030 (soil)

Matrix Spike (B3C1426-MS1)	Source: Y303344-01			Prepared: 03/14/2023 Analyzed: 03/14/2023						
1,2,4-Trimethylbenzene	0.0973	0.00200	mg/kg	0.100	ND	97.3	70-130			
1,3,5-Trimethylbenzene	0.104	0.00200	"	0.100	ND	104	70-130			
Benzene	0.0804	0.00200	"	0.100	ND	80.4	70-130			
Ethylbenzene	0.0959	0.00200	"	0.100	ND	95.9	70-130			
Naphthalene	0.107	0.00380	"	0.100	ND	107	70-130			
Toluene	0.0740	0.00200	"	0.100	ND	74.0	70-130			
o-Xylene	0.0820	0.00200	"	0.100	ND	82.0	70-130			
m,p-Xylene	0.191	0.00400	"	0.200	ND	95.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.8	70-130			

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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
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Batch B3C1426 - EPA 5030 (soil)

Matrix Spike Dup (B3C1426-MSD1)	Source: Y303344-01			Prepared: 03/14/2023 Analyzed: 03/14/2023						
1,2,4-Trimethylbenzene	0.0946	0.00200	mg/kg	0.100	ND	94.6	70-130	2.84	20	
1,3,5-Trimethylbenzene	0.0976	0.00200	"	0.100	ND	97.6	70-130	5.96	20	
Benzene	0.0760	0.00200	"	0.100	ND	76.0	70-130	5.58	20	
Ethylbenzene	0.0853	0.00200	"	0.100	ND	85.3	70-130	11.7	20	
Naphthalene	0.0993	0.00380	"	0.100	ND	99.3	70-130	7.00	20	
Toluene	0.0735	0.00200	"	0.100	ND	73.5	70-130	0.705	20	
o-Xylene	0.0815	0.00200	"	0.100	ND	81.5	70-130	0.709	20	
m,p-Xylene	0.171	0.00400	"	0.200	ND	85.3	70-130	11.5	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		105	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		100	70-130			

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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 B3C1501 - EPA 3580</b>										
<b>Blank (B3C1501-BLK1)</b>										
					Prepared: 03/15/2023 Analyzed: 03/16/2023					
Diesel (C10-C28)	ND	25.0	mg/kg							U
Residual Range Organics (C28-C40)	ND	100	"							U
Surrogate: o-Terphenyl	23		"	24.9		93.9	50-150			

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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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 B3C1501 - EPA 3580**

**LCS (B3C1501-BS1)**

Prepared: 03/15/2023 Analyzed: 03/16/2023

Diesel (C10-C28)	958	50.0	mg/kg	1000		95.8	70-130			
Residual Range Organics (C28-C40)	1120	200	"	1000		112	70-130			
Surrogate: o-Terphenyl	50		"	49.8		101	50-150			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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 B3C1501 - EPA 3580**

<b>Matrix Spike (B3C1501-MS1)</b>	<b>Source: Y303342-01</b>			<b>Prepared: 03/15/2023 Analyzed: 03/16/2023</b>						
Diesel (C10-C28)	906	50.0	mg/kg	1000	48.5	85.7	70-130			
Residual Range Organics (C28-C40)	1120	200	"	1000	177	94.7	70-130			
Surrogate: o-Terphenyl	44		"	49.8		89.0	50-150			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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 B3C1501 - EPA 3580**

<b>Matrix Spike Dup (B3C1501-MSD1)</b>	<b>Source: Y303342-01</b>			<b>Prepared: 03/15/2023 Analyzed: 03/16/2023</b>						
Diesel (C10-C28)	865	50.0	mg/kg	1000	48.5	81.7	70-130	4.59	35	
Residual Range Organics (C28-C40)	1090	200	"	1000	177	90.8	70-130	3.47	35	
Surrogate: o-Terphenyl	41		"	49.8		83.0	50-150			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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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**Metals by EPA 6000/7000 Series Methods - 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 B3C2419 - EPA 3050B**

**Blank (B3C2419-BLK1)**

Prepared: 03/24/2023 Analyzed: 03/28/2023

Arsenic	ND	0.000100	mg/kg							
Barium	ND	0.0100	"							
Cadmium	ND	0.000100	"							
Copper	ND	0.0100	"							
Lead	ND	0.0100	"							
Nickel	ND	0.0100	"							
Selenium	ND	0.000100	"							
Silver	ND	0.000100	"							
Zinc	ND	0.100	"							

**LCS (B3C2419-BS1)**

Prepared: 03/24/2023 Analyzed: 03/28/2023

Arsenic	0.0472	0.000100	mg/kg	0.0500		94.5	80-120			
Barium	5.43	0.0100	"	5.00		109	80-120			
Cadmium	0.0555	0.000100	"	0.0500		111	80-120			
Copper	0.522	0.0100	"	0.500		104	80-120			
Lead	0.0585	0.0100	"	0.0500		117	80-120			
Nickel	0.0510	0.0100	"	0.0500		102	80-120			
Selenium	0.0516	0.000100	"	0.0500		103	80-120			
Silver	0.0585	0.000100	"	0.0500		117	80-120			
Zinc	0.521	0.100	"	0.500		104	80-120			

**Matrix Spike (B3C2419-MS1)**

Source: Y303267-01

Prepared: 03/24/2023 Analyzed: 03/28/2023

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**Metals by EPA 6000/7000 Series Methods - 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 B3C2419 - EPA 3050B**

<b>Matrix Spike (B3C2419-MS1)</b>		<b>Source: Y303267-01</b>			Prepared: 03/24/2023 Analyzed: 03/28/2023					
Arsenic	6.87	0.0879	mg/kg	4.40	2.96	88.9	75-125			
Barium	564	8.79	"	440	125	100	75-125			
Cadmium	4.90	0.0879	"	4.40	0.213	107	75-125			
Copper	51.8	8.79	"	44.0	10.5	93.8	75-125			
Lead	14.8	8.79	"	4.40	10.9	89.5	75-125			
Nickel	12.3	8.79	"	4.40	8.89	78.6	75-125			
Selenium	4.34	0.0879	"	4.40	0.239	93.4	75-125			
Silver	3.91	0.0879	"	4.40	0.0359	88.2	75-125			
Zinc	91.4	87.9	"	44.0	50.3	93.5	75-125			

<b>Matrix Spike Dup (B3C2419-MSD1)</b>		<b>Source: Y303267-01</b>			Prepared: 03/24/2023 Analyzed: 03/28/2023					
Arsenic	7.00	0.0955	mg/kg	4.78	2.96	84.7	75-125	1.98	20	
Barium	596	9.55	"	478	125	98.7	75-125	5.50	20	
Cadmium	5.28	0.0955	"	4.78	0.213	106	75-125	7.49	20	
Copper	54.3	9.55	"	47.8	10.5	91.6	75-125	4.77	20	
Lead	14.9	9.55	"	4.78	10.9	85.0	75-125	0.832	20	
Nickel	12.4	9.55	"	4.78	8.89	72.4	75-125	0.0256	20	QM-07
Selenium	4.66	0.0955	"	4.78	0.239	92.5	75-125	7.01	20	
Silver	4.32	0.0955	"	4.78	0.0359	89.6	75-125	9.85	20	
Zinc	93.4	95.5	"	47.8	50.3	90.2	75-125	2.12	20	

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**Classical Chemistry Parameters - Quality Control**  
**Origins Laboratory, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch B3C1606 - DTPA Sorbitol Preparation**

**Blank (B3C1606-BLK1)**

Prepared: 03/16/2023 Analyzed: 03/17/2023

Boron ND 0.100 mg/L

**Duplicate (B3C1606-DUP1)**

**Source: Y303344-05**

Prepared: 03/16/2023 Analyzed: 03/17/2023

Boron 0.605 0.100 mg/L 0.636 4.96 50

**Batch B3C1609 - Saturated Paste Metals**

**Blank (B3C1609-BLK1)**

Prepared: 03/16/2023 Analyzed: 03/20/2023

Calcium PPM ND 10.0 mg/L

SAR 0.00 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

**Duplicate (B3C1609-DUP1)**

**Source: Y303344-01**

Prepared: 03/16/2023 Analyzed: 03/20/2023

SAR 0.00 SAR 2.57 200 200

Calcium PPM 88.6 10.0 mg/L 96.4 8.48 50

Magnesium PPM 53.2 10.0 " 53.3 0.239 50

Sodium PPM 121 10.0 " 127 4.66 50

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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 B3C1612 - Saturated Paste pH/EC</b>										
<b>Blank (B3C1612-BLK1)</b>					Prepared: 03/16/2023 Analyzed: 03/17/2023					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
<b>Duplicate (B3C1612-DUP1)</b>					<b>Source: Y303344-01</b> Prepared: 03/16/2023 Analyzed: 03/17/2023					
pH	8.18		pH Units		8.24			0.731	25	
Specific Conductance (EC)	1.47	0.00500	mmhos/cm		1.57			6.71	25	

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**Total Metals by 7196A - Quality Control**  
**Waypoint Analytical, LLC.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch L672583 -</b>										
<b>DUP (L 86714-DUP)</b>		<b>Source: 86714</b>			Prepared: Analyzed: 03/28/2023					
Chromium, Hexavalent	ND	0.5	mg/Kg		<0.500		-	0	20	
<b>MS (L 86714-MS)</b>		<b>Source: 86714</b>			Prepared: Analyzed: 03/28/2023					
Chromium, Hexavalent	35.3	2.5	mg/Kg	38.9	<1.22	91	75-125			
<b>LCS (LCS)</b>		Prepared: Analyzed: 03/28/2023								
Chromium, Hexavalent	7.31	0.5	mg/Kg	8		91	75-125			
<b>LRB (LRB)</b>		Prepared: Analyzed: 03/28/2023								
Chromium, Hexavalent	ND	0.5	mg/Kg				-			

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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
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Batch L670656 - 3550B

MSD (L 81445-MSD-L670656)		Source: 81445			Prepared: 03/18/2023 Analyzed: 03/19/2023					
Pyrene	0.124	0.00067	mg/Kg	0.167	<0.000643	74.2	30-130	3.9	30	
Fluoranthene	0.125	0.00067	"	0.167	<0.000394	74.8	30-130	3.1	30	
Acenaphthene	0.118	0.00067	"	0.167	<0.000304	70.6	30-130	1.7	30	
1-Methylnaphthalene	0.117	0.00201	"	0.167	<0.00109	70	30-130	2.5	30	
Indeno(1,2,3-cd)pyrene	0.0975	0.00067	"	0.167	<0.000627	58.3	30-130	13.8	30	
Naphthalene	0.11	0.00201	"	0.167	<0.00145	65.8	30-130	0.9	30	
Anthracene	0.126	0.00067	"	0.167	<0.000334	75.4	30-130	3.8	30	
Benzo(a)anthracene	0.13	0.00067	"	0.167	<0.000493	77.8	30-130	0.7	30	
Benzo(b)fluoranthene	0.074	0.00067	"	0.167	<0.000585	44.3	30-130	7.1	30	
Benzo(k)fluoranthene	0.102	0.00067	"	0.167	<0.000437	61	30-130	0.9	30	
Chrysene	0.126	0.00067	"	0.167	<0.000624	75.4	30-130	1.6	30	
Dibenz(a,h)anthracene	0.142	0.00067	"	0.167	<0.000614	85	30-130	4.1	30	
Fluorene	0.131	0.00067	"	0.167	<0.000286	78.4	30-130	3.8	30	
Benzo(a)pyrene	0.135	0.00067	"	0.167	<0.000468	80.8	30-130	0.7	30	
2-Methylnaphthalene	0.116	0.00201	"	0.167	<0.00194	69.4	30-130	1.7	30	
Surrogate: Nitrobenzene-d5	60.3		"	0.333	174	60.3	29-110			
Surrogate: 2-Fluorobiphenyl	57		"	0.333	169	57	33-115			
Surrogate: 4-Terphenyl-d14	62.7		"	0.333	189	62.7	33-122			

MS (L 81445-MS-L670656)		Source: 81445			Prepared: 03/18/2023 Analyzed: 03/19/2023					
Dibenz(a,h)anthracene	0.148	0.00067	mg/Kg	0.166	<0.000614	89.1	30-130			
Fluoranthene	0.129	0.00067	"	0.166	<0.000394	77.7	30-130			
Pyrene	0.129	0.00067	"	0.166	<0.000643	77.7	30-130			
Fluorene	0.126	0.00067	"	0.166	<0.000286	75.9	30-130			
Chrysene	0.124	0.00067	"	0.166	<0.000624	74.6	30-130			
Naphthalene	0.109	0.00201	"	0.166	<0.00145	65.6	30-130			
Indeno(1,2,3-cd)pyrene	0.112	0.00067	"	0.166	<0.000627	67.4	30-130			

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 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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
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**Batch L670656 - 3550B**

MS (L 81445-MS-L670656)	Source: 81445			Prepared: 03/18/2023 Analyzed: 03/19/2023						
1-Methylnaphthalene	0.114	0.00201	mg/Kg	0.166	<0.00109	68.6	30-130			
Benzo(b)fluoranthene	0.0795	0.00067	"	0.166	<0.000585	47.8	30-130			
Benzo(a)pyrene	0.136	0.00067	"	0.166	<0.000468	81.9	30-130			
Benzo(a)anthracene	0.129	0.00067	"	0.166	<0.000493	77.7	30-130			
Acenaphthene	0.116	0.00067	"	0.166	<0.000304	69.8	30-130			
2-Methylnaphthalene	0.114	0.00201	"	0.166	<0.00194	68.6	30-130			
Benzo(k)fluoranthene	0.103	0.00067	"	0.166	<0.000437	62	30-130			
Anthracene	0.131	0.00067	"	0.166	<0.000334	78.9	30-130			
Surrogate: Nitrobenzene-d5	64.6		"	0.331	174	64.6	29-110			
Surrogate: 4-Terphenyl-d14	70.3		"	0.331	189	70.3	33-122			
Surrogate: 2-Fluorobiphenyl	60.7		"	0.331	169	60.7	33-115			

LCS (LCS-L670656)	Prepared: 03/18/2023 Analyzed: 03/19/2023									
Chrysene	0.119	0.00067	mg/Kg	0.167		71.2	30-130			
Dibenz(a,h)anthracene	0.143	0.00067	"	0.167		85.6	30-130			
Fluorene	0.116	0.00067	"	0.167		69.4	30-130			
Naphthalene	0.105	0.00201	"	0.167		62.8	30-130			
Benzo(k)fluoranthene	0.103	0.00067	"	0.167		61.6	30-130			
Pyrene	0.116	0.00067	"	0.167		69.4	30-130			
Fluoranthene	0.123	0.00067	"	0.167		73.6	30-130			
1-Methylnaphthalene	0.112	0.00201	"	0.167		67	30-130			
Benzo(a)pyrene	0.117	0.00067	"	0.167		70	30-130			
Benzo(a)anthracene	0.118	0.00067	"	0.167		70.6	30-130			
Anthracene	0.123	0.00067	"	0.167		73.6	30-130			
Acenaphthene	0.108	0.00067	"	0.167		64.6	30-130			
2-Methylnaphthalene	0.112	0.00201	"	0.167		67	30-130			
Indeno(1,2,3-cd)pyrene	0.114	0.00067	"	0.167		68.2	30-130			

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Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01

**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
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**Batch L670656 - 3550B**

**LCS (LCS-L670656)**

Prepared: 03/18/2023 Analyzed: 03/19/2023

Benzo(b)fluoranthene	0.0773	0.00067	mg/Kg	0.167		46.2	30-130			
Surrogate: Nitrobenzene-d5	56.4		"	0.333		56.4	29-110			
Surrogate: 4-Terphenyl-d14	63.9		"	0.333		63.9	33-122			
Surrogate: 2-Fluorobiphenyl	56.7		"	0.333		56.7	33-115			

**LRB (LRB-L670656)**

Prepared: 03/18/2023 Analyzed: 03/19/2023

Chrysene	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	"				-			
Benzo(k)fluoranthene	ND	0.00067	"				-			
Naphthalene	ND	0.00201	"				-			
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	56.7		"	0.333		56.7	29-110			
Surrogate: 4-Terphenyl-d14	63.3		"	0.333		63.3	33-122			
Surrogate: 2-Fluorobiphenyl	57.6		"	0.333		57.6	33-115			

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8000 W 44th Ave  
Wheat Ridge CO 80033

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Loustelet T5N-R64W-S15 L01

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**Notes and Definitions**

U Sample is Non-Detect.

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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.

Calculated results may use J-flag data (instead of reported "ND") as part of calculation to provide a more accurate result.

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.*



April 05, 2023

Eagle Environmental Consulting, LLC

Martin C Eckert III

8000 W 44th Ave

Wheat Ridge CO 80033

**Project Name - Noble - Loustelet T5N-R64W-S15 L01 TB**      **Project Number - [none]**

Attached are your analytical results for Noble - Loustelet T5N-R64W-S15 L01 TB received by Origins Laboratory, Inc. March 24, 2023. This project is associated with Origins project number Y303656-01.

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, LLC  
8000 W 44th Ave  
Wheat Ridge CO 80033

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Loustelet T5N-R64W-S15 L01 TB

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Background-01@1'	Y303656-01	Soil	March 14, 2023 14:35	03/24/2023 08:50

Origins Laboratory, Inc.



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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01 TB

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

**Sample Receipt Checklist**

Origins Work Order: 4303050 Client: Eagle Environ-  
 Client Project ID: Loustelet... Tank Batter

Checklist Completed by: TSW Shipped Via: HD  
 Date/time completed: 3/24/23 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: n/a

Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 1 / 4 °c \_\_\_\_\_ °c \_\_\_\_\_ °c (Describe) \_\_\_\_\_ °c  
 Thermometer ID: TDU4

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> ?	/			
Is there ice present (document if blue ice is used)	/			
Are custody seals present on cooler? (if so, document in comments if they are signed and dated, broken or intact)			/	
Are custody seals present on each sample container? (if so, document in comments if they are signed and dated, broken or intact)			/	
Were all samples received intact <sup>(1)</sup> ?	/			
Was adequate sample volume provided <sup>(1)</sup> ?	/			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)</sup> ?		/		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)</sup> ?	/			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	/			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	/			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)</sup> ?	/			
For volatiles in water – is there headspace (> ¼ inch bubble) present? If yes, contact client and note in narrative.			/	
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)			/	
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 3/27/23

Origins Laboratory, Inc.  


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

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01 TB

**Background-01@1'**  
**3/14/2023 2:35:00PM**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Prepared	Analyzed	Notes
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**Origins Laboratory, Inc.**  
**Y303656-01 (Soil)**

**pH in Soil by 9045D**

pH	8.08		pH Units	1	B3C2808	HJD	03/28/2023	03/29/2023	
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**Table 915 metals by EPA 6020B**

Arsenic	2.45	0.0907	mg/kg	10	B3C2421	CNG	03/24/2023	03/29/2023	
Barium	71.8	9.07	"	"	"	CNG	"	"	
Cadmium	0.211	0.0907	"	"	"	CNG	"	"	
Copper	10.1	9.07	"	"	"	CNG	"	"	
Lead	10.4	9.07	"	"	"	CNG	"	"	
Nickel	ND	9.07	"	"	"	CNG	"	"	
Selenium	0.226	0.0907	"	"	"	CNG	"	"	
Silver	0.108	0.0907	"	"	"	CNG	"	"	
Zinc	ND	90.7	"	"	"	CNG	"	"	

Origins Laboratory, Inc.



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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01 TB

**Metals by EPA 6000/7000 Series Methods - 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 B3C2421 - EPA 3050B**

**Blank (B3C2421-BLK1)**

Prepared: 03/24/2023 Analyzed: 03/28/2023

Arsenic	ND	0.000100	mg/kg							
Barium	ND	0.0100	"							
Cadmium	ND	0.000100	"							
Copper	ND	0.0100	"							
Lead	ND	0.0100	"							
Nickel	ND	0.0100	"							
Selenium	ND	0.000100	"							
Silver	ND	0.000100	"							
Zinc	ND	0.100	"							

**LCS (B3C2421-BS1)**

Prepared: 03/24/2023 Analyzed: 03/28/2023

Arsenic	0.0506	0.000100	mg/kg	0.0500		101	80-120			
Barium	5.07	0.0100	"	5.00		101	80-120			
Cadmium	0.0507	0.000100	"	0.0500		101	80-120			
Copper	0.471	0.0100	"	0.500		94.2	80-120			
Lead	0.0509	0.0100	"	0.0500		102	80-120			
Nickel	0.0494	0.0100	"	0.0500		98.8	80-120			
Selenium	0.0510	0.000100	"	0.0500		102	80-120			
Silver	0.0509	0.000100	"	0.0500		102	80-120			
Zinc	0.482	0.100	"	0.500		96.4	80-120			

**Matrix Spike (B3C2421-MS1)**

**Source: Y303606-01**

Prepared: 03/24/2023 Analyzed: 03/28/2023

Arsenic	7.06	0.0925	mg/kg	4.62	2.77	92.9	75-125			
Barium	543	9.25	"	462	86.1	98.8	75-125			
Cadmium	4.67	0.0925	"	4.62	0.0707	99.5	75-125			
Copper	43.8	9.25	"	46.2	3.80	86.6	75-125			
Lead	8.69	9.25	"	4.62	4.70	86.4	75-125			

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01 TB

**Metals by EPA 6000/7000 Series Methods - 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 B3C2421 - EPA 3050B**

**Matrix Spike (B3C2421-MS1)**

**Source: Y303606-01**

Prepared: 03/24/2023 Analyzed: 03/28/2023

Nickel	7.79	9.25	mg/kg	4.62	4.33	74.9	75-125			QM-07
Selenium	4.35	0.0925	"	4.62	0.0535	93.0	75-125			
Silver	4.52	0.0925	"	4.62	0.0190	97.3	75-125			
Zinc	62.0	92.5	"	46.2	21.1	88.4	75-125			

**Matrix Spike Dup (B3C2421-MSD1)**

**Source: Y303606-01**

Prepared: 03/24/2023 Analyzed: 03/28/2023

Arsenic	8.18	0.0981	mg/kg	4.90	2.77	110	75-125	14.7	20	
Barium	591	9.81	"	490	86.1	103	75-125	8.50	20	
Cadmium	5.01	0.0981	"	4.90	0.0707	101	75-125	7.08	20	
Copper	47.4	9.81	"	49.0	3.80	88.9	75-125	7.79	20	
Lead	9.77	9.81	"	4.90	4.70	104	75-125	11.7	20	
Nickel	8.79	9.81	"	4.90	4.33	91.0	75-125	12.0	20	
Selenium	4.84	0.0981	"	4.90	0.0535	97.7	75-125	10.6	20	
Silver	4.76	0.0981	"	4.90	0.0190	96.8	75-125	5.33	20	
Zinc	68.7	98.1	"	49.0	21.1	96.9	75-125	10.2	20	

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 8000 W 44th Ave  
 Wheat Ridge CO 80033

Martin C Eckert III  
 Project Number: [none]  
 Project: Noble - Loustelet T5N-R64W-S15 L01 TB

**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 B3C2808 - Saturated Paste pH/EC**

**Duplicate (B3C2808-DUP1)**

**Source: Y303614-13**

Prepared: 03/28/2023 Analyzed: 03/29/2023

pH	7.86		pH Units		7.99			1.64	25	
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Origins Laboratory, Inc.



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

Martin C Eckert III  
Project Number: [none]  
Project: Noble - Loustelet T5N-R64W-S15 L01 TB

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### Notes and Definitions

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.

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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