

## Flowline Closure Checklist

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

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: Pioneer USX #07-08D		Date: 05/10/24 - 05/13/24				Remediation Project #: 26206			
Associated Wells: 05-123-33553		Age of Site: Years				Number of Photos Attached: 8			

Starting point: (GPS coordinates and descriptions) 40.15094 / -104.587062 (Pt. A at wellhead)

End point: (GPS coordinates and descriptions) 40.149492 / -104.590278 (Pt. B at associated separator)

USCS Soil Type: Silty SAND      Estimated Depth to Groundwater: ~15'-20'

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.

### Flowlines

Flowline type	O, G, W							
Depth	~3'-5'							
Age	Years							
Length	1048'							
Construction Material	Steel							
Were flowlines pulled?	Yes							
Visual Integrity of lines	Good							
Visual impacts if trenched	N/A							
PID Readings if trenched	1.1	2.0	2.5	3.4	3.1	4.1	3.4	2.1
Sample taken? Location/Sample ID#	FL01R-S	FL02R-W	FL03	FL04	FL05	FL06	FL07	FL08
Photo Number(s)	See photolog							

Other observations regarding on location flowlines:  
~ 1048' of flowline removed, Pt. A, Pt. B and 3 cutpoints for removal (FL03, FL05, FL07) submitted for lab analysis.

### Summary

Was impacted soil identified?		<input checked="" type="radio"/> No	Yes - less than 10 cubic yards	Yes - more than 10 cubic yards
Total number of samples field screened: 8		Total number of samples collected: 8		
Highest PID Reading: 4.1		Total number of samples submitted to lab for analysis: 5		
<del>If more than 10 cubic yards of impacted soil were observed:</del>				
<del>Vertical extent:</del>		<del>Estimated spill volume:</del>		
<del>Lateral extent:</del>		<del>Volume of soil removed:</del>		
<del>Is additional investigation required?</del>				
Was groundwater encountered during the investigation?				
No		Yes - not impacted or in contact with impacted soils		Yes - groundwater impacted and/or in contact with impacted soils
Measured depth to groundwater:		Was remedial groundwater removal conducted? Yes      No		
Date Groundwater was encountered:		Commencement date of removal:		
Sheen on groundwater?      Yes      No		Volume of groundwater removed prior to sampling:		
Free product observed?      Yes      No		Volume of groundwater removed post sampling:		
Total number of samples collected:		Total Volume of groundwater removed:		
Total number of samples submitted to lab for analysis:				



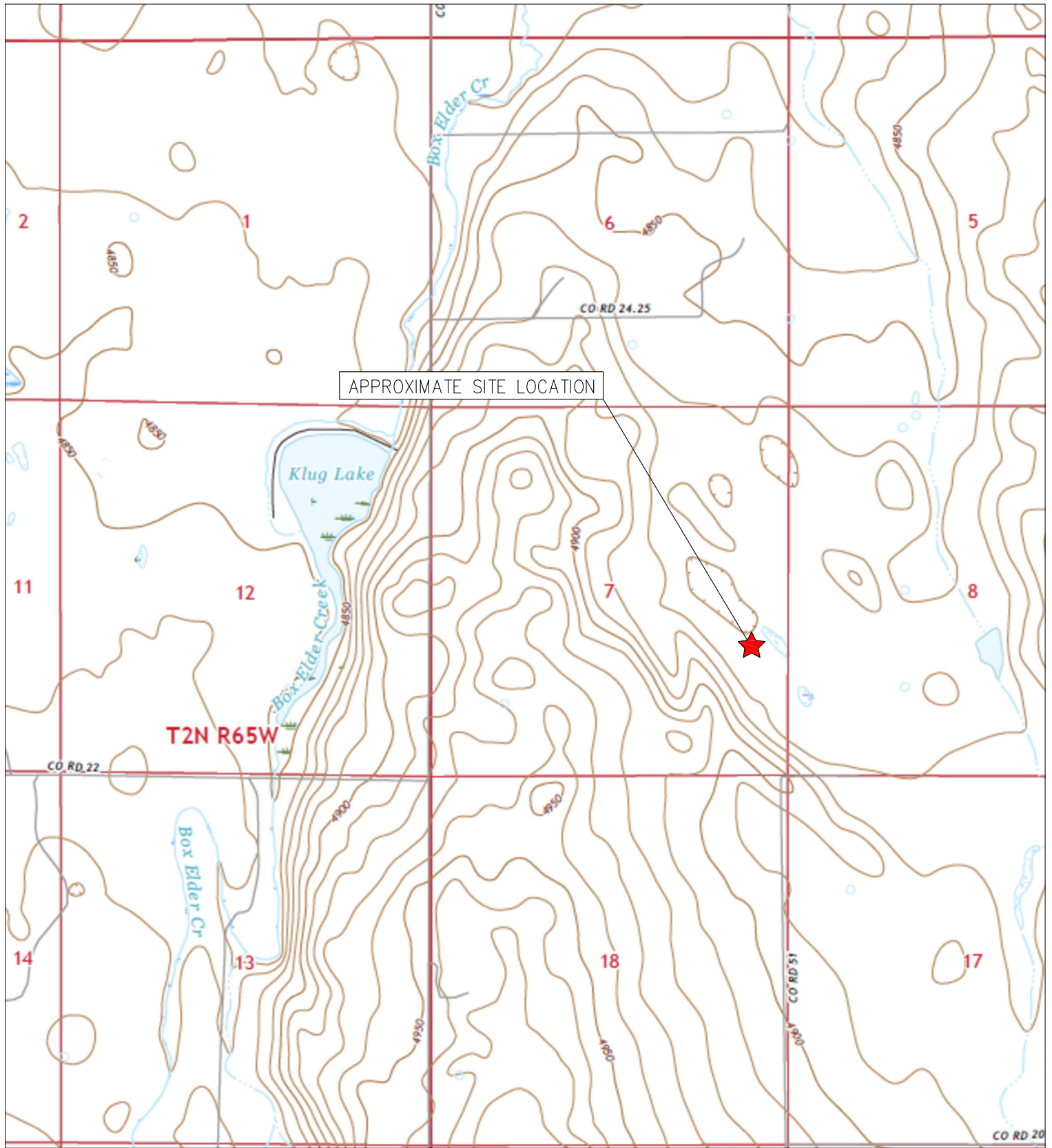
## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**

**Figure 4: Metals in Soil Map**



TOPOGRAPHIC SITE LOCATION MAP  
 PIONEER USX #Y07-08D  
 CLOSURE ASSESSMENT  
 40.150940 / -104.587062  
 NE¼ SE¼ SEC.7 T2N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-33553  
 REMEDIATION # 26206






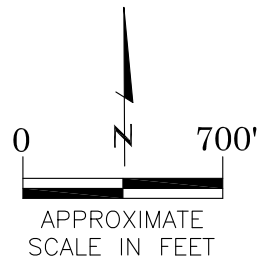
**EAGLE**  
 ENVIRONMENTAL  
 CONSULTING, LLC

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



LEGEND

-  FORMER PIONEER USX #Y07-08D WELLHEAD
-  ASSOCIATED SEPARATOR
-  APPROXIMATE FLOWLINE LOCATION (REMOVED)



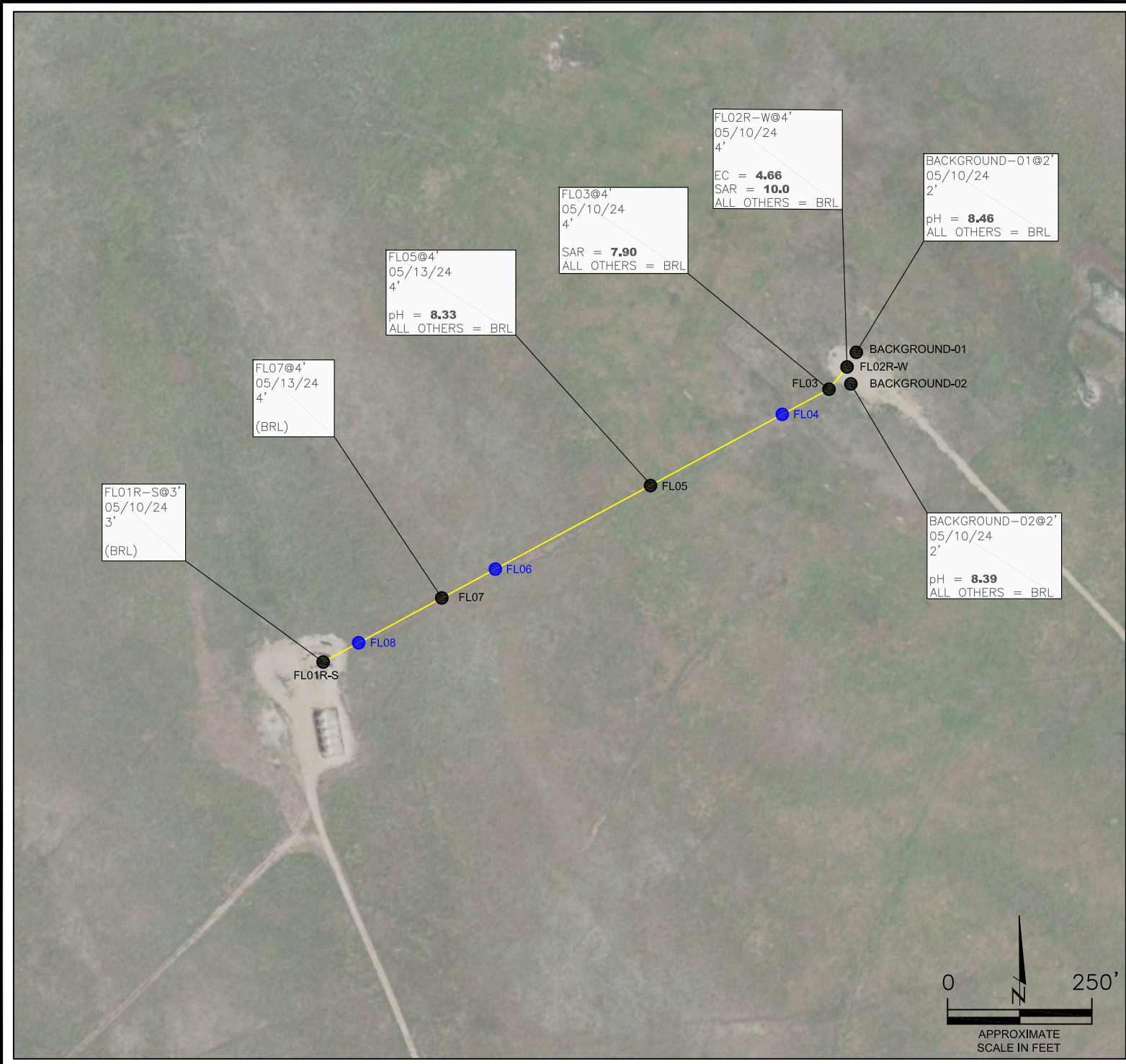
AERIAL SITE LOCATION MAP  
PIONEER USX #Y07-08D  
CLOSURE ASSESSMENT  
40.150940 / -104.587062  
NE $\frac{1}{4}$  SE $\frac{1}{4}$  SEC.7 T2N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-33553  
REMEDIATION # 26206

FIGURE NO.  
2

DRAWN BY:  
ZM



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



**LEGEND**

- APPROXIMATE FLOWLINE LOCATION (REMOVED)
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- SS-02 APPROXIMATE LOCATION OF SOIL SAMPLES SUBMITTED FOR LABORATORY ANALYSIS

**PARAMETERS**

SAMPLE LOCATION  
DATE  
DEPTH (FEET)  
B = BENZENE (mg/kg)  
T = TOLUENE (mg/kg)  
E = ETHYLBENZENE (mg/kg)  
X = TOTAL XYLENES (mg/kg)  
N = NAPHTHALENE (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)  
Bmn= BORON (mg/L)  
EC = SPECIFIC CONDUCTANCE (mmhos/cm)  
SAR= SODIUM ADSORPTION RATIO  
pH = pH (pH UNITS)  
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) (mg/kg)

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

(BRL) = ALL VALUES BELOW REGULATORY LIMITS

BRL = BELOW REGULATORY LIMITS

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 IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

SOIL ANALYTICAL MAP  
PIONEER USX #Y07-08D  
CLOSURE ASSESSMENT  
40.150940 / -104.587062  
NE ¼ SEC. 7 T2N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-33553  
REMEDATION # 26206

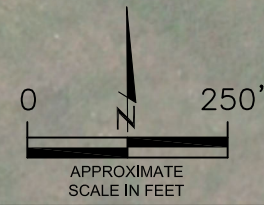
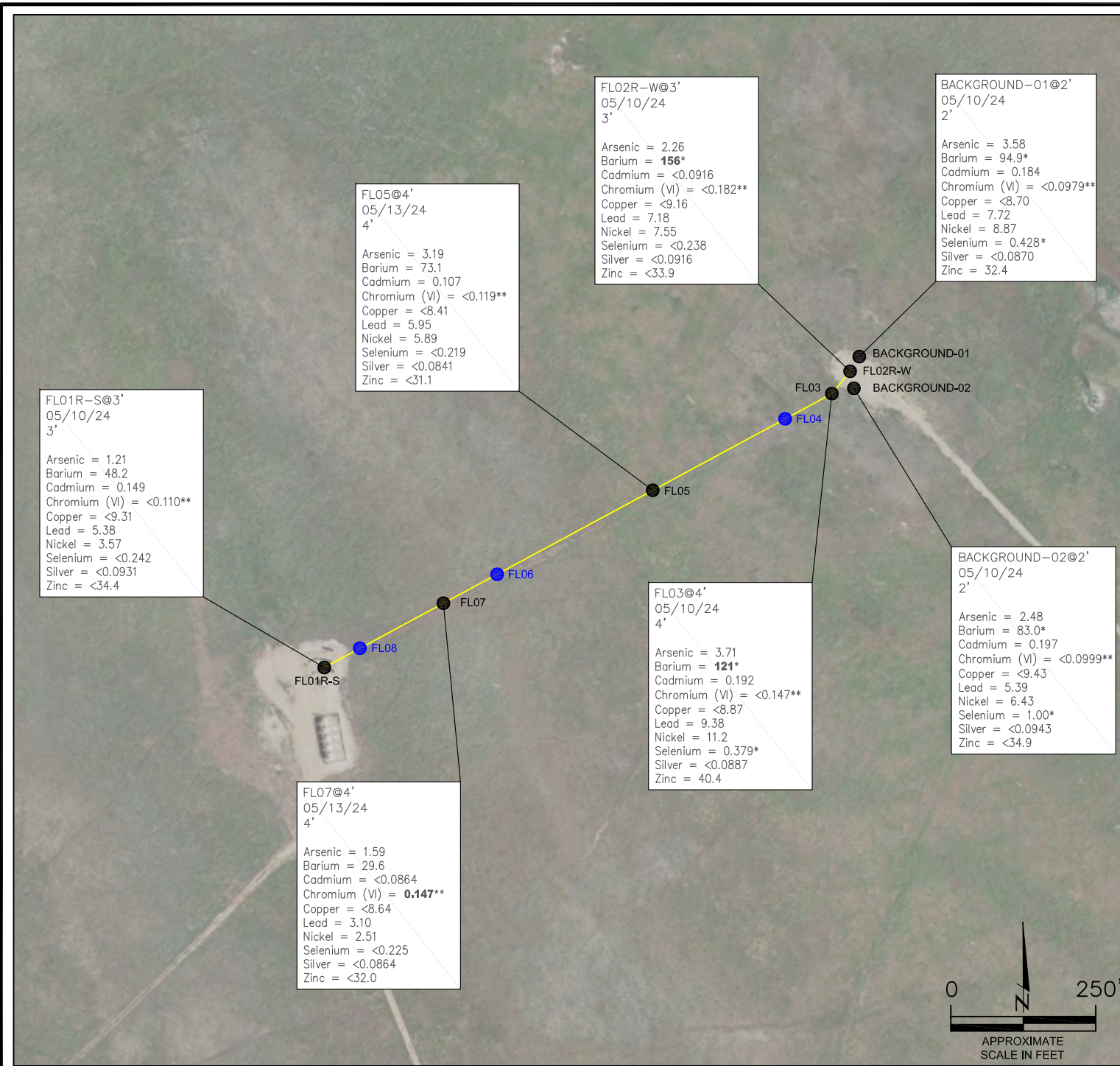


FIGURE NO.  
3

DRAWN BY:  
ZM

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



**LEGEND**

- APPROXIMATE FLOWLINE LOCATION (REMOVED)
- SS-02 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

**NOTES:**

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

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

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

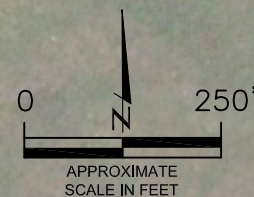
**METALS IN SOIL MAP**  
 PIONEER USX #Y07-08D  
 CLOSURE ASSESSMENT  
 40.150940 / -104.587062  
 NE¼ SE¼ SEC.7 T2N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-33553  
 REMEDIATION # 26206

FIGURE NO.  
4

DRAWN BY:  
ZM



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





## **TABLES**

**Table 1: Field Data Summary Table**

**Table 2: Summary of Volatile Organic Soil Chemistry Data**

**Table 3: Summary of PAHs Soil Chemistry Data**

**Table 4: Summary of Soil Suitability for Reclamation**

**Table 5: Summary of Metals in Soil Chemistry Data**

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE ENERGY 100322**  
**PIONEER USX #Y07-08D, WELD COUNTY, COLORADO**  
**REM # 26206**

Sample ID	Sample Date	Depth	GPS Data		VOC Concentration (ppm)
			Latitude	Longitude	
FL01R-S @ 3'	5/10/2024	3	40.149509	-104.590303	1.1
FL02R-W @ 4'	5/10/2024	4	40.150898	-104.587023	2.0
FL03 @ 4'	5/10/2024	4	40.150801	-104.587015	2.5
FL04 @ 5'	5/13/2024	5	40.150661	-104.587431	3.4
FL05 @ 4'	5/13/2024	4	40.150321	-104.588237	3.1
FL06 @ 4'	5/13/2024	4	40.150045	-104.588950	4.1
FL07 @ 4'	5/13/2024	4	40.149846	-104.589416	3.4
FL08 @ 4'	5/13/2024	4	40.149631	-104.589976	2.1
BG-01 @ 2'	5/10/2024	2	40.150876	-104.587095	2.5
BG-02 @ 2'	5/10/2024	2	40.150918	-104.586976	2.2

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

ft. = Feet

bgs = Below ground surface

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE ENERGY 100322  
PIONEER USX #Y07-08D, WELD COUNTY, COLORADO  
REM # 26206

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
FL01R-S @ 3'	5/10/2024	3	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380	<500	<0.200	<25.0	<100
FL02R-W @ 4'	5/10/2024	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380	<500	<0.200	<25.0	<100
FL03 @ 4'	5/10/2024	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380	<500	<0.200	<25.0	<100
FL05 @ 4'	5/13/2024	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380	<500	<0.200	<25.0	<100
FL07 @ 4'	5/13/2024	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380	<500	<0.200	<25.0	<100

1. Bold values are equal to or exceed the ECMC Table 915-1 limit(s)
2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
3. \* Indicates laboratory minimum detection limit in excess of SSL
4. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE ENERGY 100322  
PIONEER USX #Y07-08D, WELD COUNTY, COLORADO  
REM # 26206

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01R-S @ 3'	5/10/2024	3	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002
FL02R-W @ 4'	5/10/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002
FL03 @ 4'	5/10/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002
FL05 @ 4'	5/13/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002
FL07 @ 4'	5/13/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002

1. Bold values are equal to or exceed the ECMC Table 915-1 limit(s)
  2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
  3. \* Indicates laboratory minimum detection limit in excess of SSL
- NA - Not analyzed

**TABLE 4**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE ENERGY 100322**  
**PIONEER USX #Y07-08D, WELD COUNTY, COLORADO**  
**REM # 26206**

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
FL01R-S @ 3'	5/10/2024	3	7.90	0.138	0.116	<0.100
FL02R-W @ 4'	5/10/2024	4	8.14	<b>4.66</b>	<b>10.0</b>	0.845
FL03 @ 4'	5/10/2024	4	8.10	3.92	<b>7.90</b>	0.893
FL05 @ 4'	5/13/2024	4	<b>8.33</b>	0.278	0.185	0.192
FL07 @ 4'	5/13/2024	4	7.94	0.0661	0.166	<0.100
BG-01 @ 2'	5/10/2024	2	<b>8.46</b>	0.281	0.181	0.324
BG-02 @ 2'	5/10/2024	2	<b>8.39</b>	0.597	2.34	0.334
Maximum Background Concentration			<b>8.46</b>	0.597	2.34	0.334
Average Background Concentration			<b>8.43</b>	0.439	1.26	0.329

1. Bold values are equal to or exceed the ECMC Table 915-1 limit(s)

2. Blue highlighted soil analytical values indicate a regulatory exceedance

NA - Not analyzed

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE ENERGY 100322  
PIONEER USX #Y07-08D, WELD COUNTY, COLORADO  
REM # 26206

Sample ID	Sample Date	Depth (ft)	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)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01R-S @ 3'	5/10/2024	3	<b>1.21</b>	48.2	0.149	<0.110*	<9.31	5.38	3.57	<0.242	<0.0931	<34.4
FL02R-W @ 4'	5/10/2024	4	<b>2.26</b>	<b>156</b>	<0.0916	<0.182*	<9.16	7.18	7.55	<0.238	<0.0916	<33.9
FL03 @ 4'	5/10/2024	4	<b>3.71</b>	<b>121</b>	0.192	<0.147*	<8.87	9.38	11.2	<b>0.379</b>	<0.0887	40.4
FL05 @ 4'	5/13/2024	4	<b>3.19</b>	73.1	0.107	<0.119*	<8.41	5.95	5.89	<0.219	<0.0841	<31.1
FL07 @ 4'	5/13/2024	4	<b>1.59</b>	29.6	<0.0864	<b>0.147</b>	<8.64	3.10	2.51	<0.225	<0.0864	<32.0
BG-01 @ 2'	5/10/2024	2	<b>3.58</b>	<b>94.9</b>	0.184	<0.0979*	<8.70	7.72	8.87	<b>0.428</b>	<0.0870	32.4
BG-02 @ 2'	5/10/2024	2	<b>2.48</b>	<b>83.0</b>	0.197	<0.0999*	<9.43	5.39	6.43	<b>1.00</b>	<0.0943	<34.9
Maximum Background Concentration			<b>3.58</b>	<b>94.9</b>	0.197			7.72	8.87	<b>1.00</b>		32.4
125% Maximum Background Concentration			<b>4.48</b>	<b>119</b>	0.246			9.65	11.1	<b>1.25</b>		40.5

1. Bold values are equal to or exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

\* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed



## **ATTACHMENT A**

### **Photo Log**

Pioneer USX #Y07-08D  
API # 05-123-33553  
Remediation # 26206

Closure Assessment

May 2024



# Flowline Removal/Assessment – 05/10/24



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



Looking west at Pt. A/terminus at wellhead  
No petroleum hydrocarbon staining or odor observed

# Flowline Removal/Assessment – 05/10/24 – 05/13/24



Looking north at flowline bellhole/ cut points for removal

No petroleum hydrocarbon staining or odor observed



Looking west at bellhole/ cut points for removal

No petroleum hydrocarbon staining or odor observed

# Flowline Removal/Assessment – 05/13/24



Looking west at bellholes/cut points for removal

No petroleum hydrocarbon staining or odor observed



Looking west at bellholes/cut points for removal

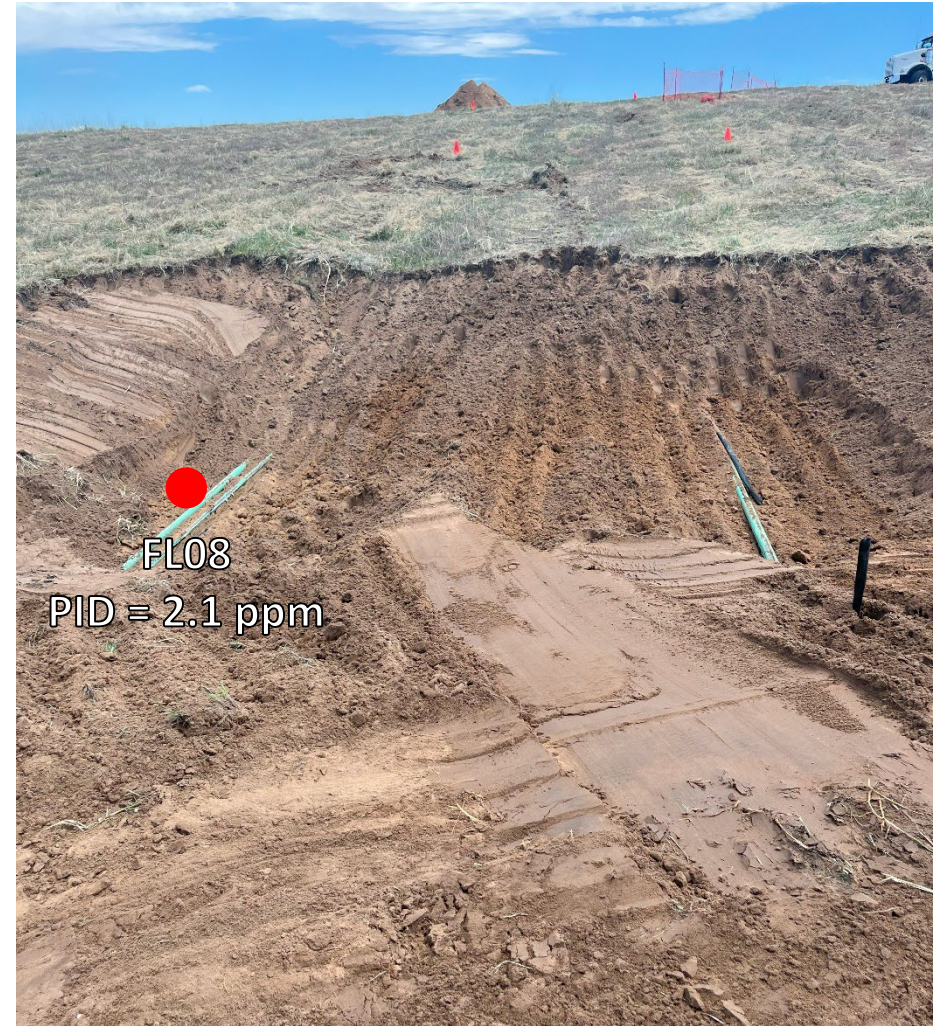
No petroleum hydrocarbon staining or odor observed

# Flowline Removal/Assessment – 05/13/24



Looking west at bellholes/cut points for removal

No petroleum hydrocarbon staining or odor observed



Looking east at bellholes/cut points for removal

No petroleum hydrocarbon staining or odor observed



## **ATTACHMENT B**

### **Laboratory Analytical Reports**

June 03, 2024

**Eagle Environmental Consulting, LLC**

**Andrew Newberry**

**8000 W 44th Ave**

**Wheat Ridge CO 80033**

**Project Name - Noble - Pioneer USX #Y07-08D**

**Project Number - [none]**

Attached are your analytical results for Noble - Pioneer USX #Y07-08D received by Origins Laboratory, Inc. May 10, 2024. This project is associated with Origins project number Y405360-01.

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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Pioneer USX #Y07-08D

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01R-S@3'	Y405360-01	Soil	May 10, 2024 13:05	05/10/2024 15:25
FL02R-W@4'	Y405360-02	Soil	May 10, 2024 13:35	05/10/2024 15:25
FL03@4'	Y405360-03	Soil	May 10, 2024 14:00	05/10/2024 15:25
Background-01@2'	Y405360-04	Soil	May 10, 2024 14:10	05/10/2024 15:25
Background-02@2'	Y405360-05	Soil	May 10, 2024 14:15	05/10/2024 15:25

Origins Laboratory, Inc.



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



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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: Y405360

Client: Eagle

Client Project ID: Pioneer USX # Y07-08

Checklist Completed by: SA/GHD

Shipped Via: HD  
 (UPS, FedEx, Hand Delivered, Pick-up, etc.)

Date/time completed: 5/10/24

Airbill #: N/A

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

Cooler Number/Temperature: 1 3.3 °C  °C  °C (Describe) \_\_\_\_\_ °C

Thermometer ID: TOOS

Requirement Description	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature between 0°C to ≤ 6°C <sup>(1)2</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)2</sup> ?	<input checked="" type="checkbox"/>			
Was adequate sample volume provided <sup>(1)2</sup> ?	<input checked="" type="checkbox"/>			
Are short holding time analytes or samples with HTs due within 48 hours present <sup>(1)2</sup> ?		<input checked="" type="checkbox"/>		
Is a chain-of-custody (COC) present and filled out completely <sup>(1)2</sup> ?	<input checked="" type="checkbox"/>			
Does the COC agree with the number and type of sample bottles received <sup>(1)2</sup> ?	<input checked="" type="checkbox"/>			
Do the sample IDs on the bottle labels match the COC <sup>(1)2</sup> ?	<input checked="" type="checkbox"/>			
Is the COC properly relinquished by the client with date and time recorded <sup>(1)2</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)2</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)			<input checked="" type="checkbox"/>	
Additional Comments (if any):				

<sup>(1)2</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) JAP

Date/Time Reviewed 5/13/24

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL01R-S@3'**

**5/10/2024 1:05:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.100	mg/L	1	B4E1410	05/14/2024	05/15/2024	
-------	----	--	-------	------	---	---------	------------	------------	--

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4E1401	05/14/2024	05/17/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	94.2 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4E1203	05/12/2024	05/14/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Naphthalene	ND		0.00380	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL01R-S@3'**

**5/10/2024 1:05:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	114 %		70-130			B4E12 03	05/12/2024	05/14/2024	
Surrogate: Toluene-d8	98.0 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	96.0 %		70-130			"	"	"	


**Metals by Saturated Paste by EPA 6010**

Calcium	0.813		0.499	meq/L	10	[CALC]	05/14/2024	05/15/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL01R-S@3'**

**5/10/2024 1:05:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-01 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND		0.020	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
Fluorene	ND		0.020	"	"	"	"	"	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	101 %		60-130			"	"	"	
Surrogate: Anthracene-d10	99.8 %		60-130			"	"	"	
Surrogate: Pyrene-d10	85.3 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	95.1 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	7.90			pH Units	1	B4E1420	05/14/2024	05/15/2024	
----	------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	0.116		0.0100	SAR	1	B4E1415	05/14/2024	05/15/2024	
-----	-------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.138		0.00500	mmhos/cm	1	B4E1420	05/14/2024	05/15/2024	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL01R-S@3'**

**5/10/2024 1:05:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-01 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	1.21		0.270	mg/kg	10	B4E1049	05/13/2024	05/14/2024	
Barium	48.2		9.31	"	"	"	"	"	
Cadmium	0.149		0.0931	"	"	"	"	"	
Copper	ND		9.31	"	"	"	"	"	
Lead	5.38		0.931	"	"	"	"	"	
Nickel	3.57		0.931	"	"	"	"	"	
Selenium	ND		0.242	"	"	"	"	"	
Silver	ND		0.0931	"	"	"	"	"	
Zinc	ND		34.4	"	"	"	"	"	

**Total Metals by 7196A**

Hexavalent Chromium	ND	0.110	0.275	mg/kg dry	1	2612252	05/15/2024	05/17/2024	U
---------------------	----	-------	-------	-----------	---	---------	------------	------------	---

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL02R-W@4'**

**5/10/2024 1:35:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.845		0.101	mg/L	1	B4E1410	05/14/2024	05/15/2024	
-------	-------	--	-------	------	---	---------	------------	------------	--

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4E1401	05/14/2024	05/17/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	98.5 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4E1203	05/12/2024	05/14/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Naphthalene	ND		0.00380	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL02R-W@4'**

**5/10/2024 1:35:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-02 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	116 %		70-130			B4E12 03	05/12/2024	05/14/2024	
Surrogate: Toluene-d8	98.8 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	103 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	23.4		0.499	meq/L	10	[CALC]	05/14/2024	05/15/2024	
Magnesium	14.3		0.823	"	"	"	"	"	
Sodium	43.5		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL02R-W@4'**

**5/10/2024 1:35:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-02 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND		0.020	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
Fluorene	ND		0.020	"	"	"	"	"	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	101 %		60-130			"	"	"	
Surrogate: Anthracene-d10	100 %		60-130			"	"	"	
Surrogate: Pyrene-d10	85.2 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	99.3 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.14			pH Units	1	B4E1420	05/14/2024	05/15/2024	
----	------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	10.0		0.0100	SAR	1	B4E1415	05/14/2024	05/15/2024	
-----	------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	4.66		0.00500	mmhos/cm	1	B4E1420	05/14/2024	05/15/2024	
---------------------------	------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL02R-W@4'**

**5/10/2024 1:35:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-02 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	2.26	0.266	0.266	mg/kg	10	B4E1049	05/13/2024	05/14/2024	
Barium	156	9.16	9.16	"	"	"	"	"	
Cadmium	ND	0.0916	0.0916	"	"	"	"	"	
Copper	ND	9.16	9.16	"	"	"	"	"	
Lead	7.18	0.916	0.916	"	"	"	"	"	
Nickel	7.55	0.916	0.916	"	"	"	"	"	
Selenium	ND	0.238	0.238	"	"	"	"	"	
Silver	ND	0.0916	0.0916	"	"	"	"	"	
Zinc	ND	33.9	33.9	"	"	"	"	"	

**Total Metals by 7196A**

Hexavalent Chromium	ND	0.182	0.454	mg/kg dry	1	2612252	05/15/2024	05/17/2024	U
---------------------	----	-------	-------	-----------	---	---------	------------	------------	---

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

FL03@4'

5/10/2024 2:00:00PM

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

**Origins Laboratory, Inc.**  
 Y405360-03 (Soil)

**Boron (DTPA Sorbitol)**

Boron	0.893		0.0998	mg/L	1	B4E1410	05/14/2024	05/15/2024	
-------	-------	--	--------	------	---	---------	------------	------------	--

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4E1401	05/14/2024	05/17/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	97.4 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4E1203	05/12/2024	05/14/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Naphthalene	ND		0.00380	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

FL03@4'

5/10/2024 2:00:00PM

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

**Origins Laboratory, Inc.**  
 Y405360-03 (Soil)

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	116 %		70-130			B4E12 03	05/12/2024	05/14/2024	
Surrogate: Toluene-d8	95.1 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	105 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	15.8		0.499	meq/L	10	[CALC]	05/14/2024	05/15/2024	
Magnesium	9.96		0.823	"	"	"	"	"	
Sodium	28.3		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL03@4'**

**5/10/2024 2:00:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-03 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND		0.020	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
Fluorene	ND		0.020	"	"	"	"	"	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	103 %		60-130			"	"	"	
Surrogate: Anthracene-d10	99.5 %		60-130			"	"	"	
Surrogate: Pyrene-d10	85.6 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	92.9 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.10			pH Units	1	B4E1420	05/14/2024	05/15/2024	
----	------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	7.90		0.0100	SAR	1	B4E1415	05/14/2024	05/15/2024	
-----	------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	3.92		0.00500	mmhos/cm	1	B4E1420	05/14/2024	05/15/2024	
---------------------------	------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

FL03@4'

5/10/2024 2:00:00PM

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

**Origins Laboratory, Inc.**  
 Y405360-03 (Soil)

**Table 915 metals by EPA 6020B**

Arsenic	3.71	0.257	mg/kg	10	B4E1049	05/13/2024	05/14/2024	
Barium	121	8.87	"	"	"	"	"	
Cadmium	0.192	0.0887	"	"	"	"	"	
Copper	ND	8.87	"	"	"	"	"	
Lead	9.38	0.887	"	"	"	"	"	
Nickel	11.2	0.887	"	"	"	"	"	
Selenium	0.379	0.230	"	"	"	"	"	
Silver	ND	0.0887	"	"	"	"	"	
Zinc	40.4	32.8	"	"	"	"	"	

**Total Metals by 7196A**

Hexavalent Chromium	ND	0.147	0.368	mg/kg dry	1	2612252	05/15/2024	05/17/2024	U
---------------------	----	-------	-------	-----------	---	---------	------------	------------	---

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Backaround-01@2'**  
**5/10/2024 2:10:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-04 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.324		0.101	mg/L	1	B4E1410	05/14/2024	05/15/2024	
-------	-------	--	-------	------	---	---------	------------	------------	--

**Metals by Saturated Paste by EPA 6010**

Calcium	2.49		0.499	meq/L	10	[CALC]	05/14/2024	05/15/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	8.46			pH Units	1	B4E1420	05/14/2024	05/15/2024	
----	------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	0.181		0.0100	SAR	1	B4E1415	05/14/2024	05/15/2024	
-----	-------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.281		0.00500	mmhos/cm	1	B4E1420	05/14/2024	05/15/2024	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

Arsenic	3.58		0.252	mg/kg	10	B4E1049	05/13/2024	05/14/2024	
Barium	94.9		8.70	"	"	"	"	"	
Cadmium	0.184		0.0870	"	"	"	"	"	
Copper	ND		8.70	"	"	"	"	"	

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Background-01@2'**  
**5/10/2024 2:10:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-04 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	7.72		0.870	mg/kg	10	B4E1049	05/13/2024	05/14/2024	
Nickel	8.87		0.870	"	"	"	"	"	
Selenium	0.428		0.226	"	"	"	"	"	
Silver	ND		0.0870	"	"	"	"	"	
Zinc	32.4		32.2	"	"	"	"	"	

**Total Metals by 7196A**

Hexavalent Chromium	ND	0.0979	0.245	mg/kg dry	1	2612252	05/15/2024	05/17/2024	U
---------------------	----	--------	-------	-----------	---	---------	------------	------------	---

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Backaround-02@2'**  
**5/10/2024 2:15:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-05 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.334		0.101	mg/L	1	B4E1410	05/14/2024	05/15/2024	
-------	-------	--	-------	------	---	---------	------------	------------	--

**Metals by Saturated Paste by EPA 6010**

Calcium	2.06		0.499	meq/L	10	[CALC]	05/14/2024	05/15/2024	
Magnesium	0.869		0.823	"	"	"	"	"	
Sodium	2.83		0.435	"	"	"	"	"	

**pH in Soil by 9045D**

pH	8.39			pH Units	1	B4E1420	05/14/2024	05/15/2024	
----	------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	2.34		0.0100	SAR	1	B4E1415	05/14/2024	05/15/2024	
-----	------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.597		0.00500	mmhos/cm	1	B4E1420	05/14/2024	05/15/2024	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

Arsenic	2.48		0.273	mg/kg	10	B4E1049	05/13/2024	05/14/2024	
Barium	83.0		9.43	"	"	"	"	"	
Cadmium	0.197		0.0943	"	"	"	"	"	
Copper	ND		9.43	"	"	"	"	"	

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Background-02@2'**  
**5/10/2024 2:15:00PM**

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

**Origins Laboratory, Inc.**  
**Y405360-05 (Soil)**

**Table 915 metals by EPA 6020B**

Lead	5.39		0.943	mg/kg	10	B4E1049	05/13/2024	05/14/2024	
Nickel	6.43		0.943	"	"	"	"	"	
Selenium	1.00		0.245	"	"	"	"	"	
Silver	ND		0.0943	"	"	"	"	"	
Zinc	ND		34.9	"	"	"	"	"	

**Total Metals by 7196A**

Hexavalent Chromium	ND	0.0999	0.250	mg/kg dry	1	2612252	05/15/2024	05/17/2024	U
---------------------	----	--------	-------	-----------	---	---------	------------	------------	---

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

**Batch B4E1203 - EPA 5030 (soil)**

**Blank (B4E1203-BLK1)**

Prepared: 05/12/2024 Analyzed: 05/13/2024

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		98.7	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		97.2	70-130			
Surrogate: 4-Bromofluorobenzene	0.14		"	0.125		112	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

Batch B4E1203 - EPA 5030 (soil)

**LCS (B4E1203-BS1)**

Prepared: 05/12/2024 Analyzed: 05/13/2024

1,2,4-Trimethylbenzene	0.104	0.00200	mg/kg	0.100		104	70-130			
1,3,5-Trimethylbenzene	0.107	0.00200	"	0.100		107	70-130			
Benzene	0.101	0.00200	"	0.100		101	70-130			
Ethylbenzene	0.103	0.00200	"	0.100		103	70-130			
Naphthalene	0.110	0.00380	"	0.100		110	70-130			
Toluene	0.102	0.00200	"	0.100		102	70-130			
o-Xylene	0.101	0.00200	"	0.100		101	70-130			
m,p-Xylene	0.207	0.00400	"	0.200		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		96.7	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		96.6	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		97.7	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

Batch B4E1203 - EPA 5030 (soil)

Matrix Spike (B4E1203-MS1)	Source: Y405285-01			Prepared: 05/12/2024 Analyzed: 05/13/2024						
1,2,4-Trimethylbenzene	0.101	0.00200	mg/kg	0.100	ND	101	70-130			
1,3,5-Trimethylbenzene	0.103	0.00200	"	0.100	ND	103	70-130			
Benzene	0.103	0.00200	"	0.100	ND	103	70-130			
Ethylbenzene	0.0997	0.00200	"	0.100	ND	99.7	70-130			
Naphthalene	0.124	0.00380	"	0.100	ND	124	70-130			
Toluene	0.102	0.00200	"	0.100	ND	102	70-130			
o-Xylene	0.0982	0.00200	"	0.100	ND	98.2	70-130			
m,p-Xylene	0.200	0.00400	"	0.200	ND	99.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		102	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.4	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		95.6	70-130			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

**Batch B4E1203 - EPA 5030 (soil)**

Matrix Spike Dup (B4E1203-MSD1)	Source: Y405285-01			Prepared: 05/12/2024 Analyzed: 05/13/2024						
1,2,4-Trimethylbenzene	0.0971	0.00200	mg/kg	0.100	ND	97.1	70-130	4.33	20	
1,3,5-Trimethylbenzene	0.0971	0.00200	"	0.100	ND	97.1	70-130	5.76	20	
Benzene	0.0987	0.00200	"	0.100	ND	98.7	70-130	4.11	20	
Ethylbenzene	0.0957	0.00200	"	0.100	ND	95.7	70-130	4.09	20	
Naphthalene	0.116	0.00380	"	0.100	ND	116	70-130	7.18	20	
Toluene	0.0963	0.00200	"	0.100	ND	96.3	70-130	5.57	20	
o-Xylene	0.0946	0.00200	"	0.100	ND	94.6	70-130	3.80	20	
m,p-Xylene	0.194	0.00400	"	0.200	ND	96.9	70-130	2.97	20	
Surrogate: 1,2-Dichloroethane-d4	0.13		"	0.125		104	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		95.3	70-130			
Surrogate: 4-Bromofluorobenzene	0.12		"	0.125		99.4	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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 B4E1401 - EPA 3550B</b>										
<b>Blank (B4E1401-BLK1)</b>										
					Prepared: 05/14/2024 Analyzed: 05/17/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	24		"	24.9		97.0	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
<b>Batch B4E1401 - EPA 3550B</b>										
<b>LCS (B4E1401-BS1)</b>										
					Prepared: 05/14/2024 Analyzed: 05/17/2024					
Diesel (C10-C28)	901	50.0	mg/kg	1000		90.1	70-130			
Residual Range Organics (C28-C40)	948	200	"	1000		94.8	70-130			
Surrogate: o-Terphenyl	58		"	49.8		116	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1401 - EPA 3550B**

<b>Matrix Spike (B4E1401-MS1)</b>	<b>Source: Y405341-01</b>		<b>Prepared: 05/14/2024 Analyzed: 05/17/2024</b>							
Diesel (C10-C28)	871	50.0	mg/kg	1000	ND	87.1	70-130			
Residual Range Organics (C28-C40)	921	200	"	1000	ND	92.1	70-130			
<i>Surrogate: o-Terphenyl</i>	52		"	49.8		104	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
<b>Batch B4E1401 - EPA 3550B</b>										
<b>Matrix Spike Dup (B4E1401-MSD1)</b>			<b>Source: Y405341-01</b>			Prepared: 05/14/2024 Analyzed: 05/17/2024				
Diesel (C10-C28)	901	50.0	mg/kg	1000	ND	90.1	70-130	3.40	35	
Residual Range Organics (C28-C40)	958	200	"	1000	ND	95.8	70-130	3.98	35	
Surrogate: o-Terphenyl	52		"	49.8		105	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B4E1049 - EPA 3050B**

**Blank (B4E1049-BLK1)**

Prepared: 05/13/2024 Analyzed: 05/14/2024

Arsenic	ND	0.290	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	0.100	"							
Copper	ND	10.0	"							
Lead	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	0.260	"							
Silver	ND	0.100	"							
Zinc	ND	37.0	"							

**LCS (B4E1049-BS1)**

Prepared: 05/13/2024 Analyzed: 05/14/2024

Arsenic	5.57	0.290	mg/kg	5.00		111	80-120			
Barium	574	10.0	"	500		115	80-120			
Cadmium	5.86	0.100	"	5.00		117	80-120			
Copper	57.6	10.0	"	50.0		115	80-120			
Lead	5.73	1.00	"	5.00		115	80-120			
Nickel	5.84	1.00	"	5.00		117	80-120			
Selenium	11.0	0.260	"	9.50		116	80-120			
Silver	5.98	0.100	"	5.00		120	80-120			
Zinc	57.0	37.0	"	50.0		114	80-120			

**Matrix Spike (B4E1049-MS1)**

Source: Y405357-01

Prepared: 05/13/2024 Analyzed: 05/14/2024

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B4E1049 - EPA 3050B**

<b>Matrix Spike (B4E1049-MS1)</b>		<b>Source: Y405357-01</b>			<b>Prepared: 05/13/2024 Analyzed: 05/14/2024</b>					
Arsenic	5.92	0.247	mg/kg	4.25	1.15	112	75-125			
Barium	532	8.50	"	425	39.6	116	75-125			
Cadmium	5.10	0.0850	"	4.25	0.0696	118	75-125			
Copper	52.9	8.50	"	42.5	0.684	123	75-125			
Lead	9.74	0.850	"	4.25	4.52	123	75-125			
Nickel	8.48	0.850	"	4.25	3.27	122	75-125			
Selenium	9.70	0.221	"	8.08	0.0400	120	75-125			
Silver	5.06	0.0850	"	4.25	0.0217	118	75-125			
Zinc	69.3	31.5	"	42.5	21.4	113	75-125			

<b>Matrix Spike Dup (B4E1049-MSD1)</b>		<b>Source: Y405357-01</b>			<b>Prepared: 05/13/2024 Analyzed: 05/14/2024</b>					
Arsenic	6.43	0.277	mg/kg	4.77	1.15	111	75-125	8.33	20	
Barium	582	9.53	"	477	39.6	114	75-125	8.88	20	
Cadmium	5.59	0.0953	"	4.77	0.0696	116	75-125	9.28	20	
Copper	57.1	9.53	"	47.7	0.684	118	75-125	7.78	20	
Lead	10.4	0.953	"	4.77	4.52	124	75-125	6.69	20	
Nickel	8.69	0.953	"	4.77	3.27	114	75-125	2.52	20	
Selenium	10.8	0.248	"	9.06	0.0400	118	75-125	10.5	20	
Silver	5.58	0.0953	"	4.77	0.0217	117	75-125	9.76	20	
Zinc	74.3	35.3	"	47.7	21.4	111	75-125	6.98	20	

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatle Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1425 - EPA 3580**

**Blank (B4E1425-BLK1)**

Prepared: 05/14/2024 Analyzed: 05/16/2024

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua

Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130
Surrogate: Anthracene-d10	200		"	200		100	60-130
Surrogate: Pyrene-d10	170		"	200		87.1	60-130
Surrogate: Benzo (a) pyrene-d12	200		"	200		97.5	60-130

**LCS (B4E1425-BS1)**

Prepared: 05/14/2024 Analyzed: 05/16/2024

1-Methylnaphthalene	0.180	0.002	mg/kg	0.200		90.1	70-130
2-Methylnaphthalene	0.181	0.002	"	0.200		90.7	70-130
Acenaphthene	0.178	0.020	"	0.200		88.9	70-130
Anthracene	0.180	0.020	"	0.200		90.0	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1425 - EPA 3580**

**LCS (B4E1425-BS1)**

Prepared: 05/14/2024 Analyzed: 05/16/2024

Benzo (a) anthracene	0.180	0.005	mg/kg	0.200		90.1	70-130			
Benzo (a) pyrene	0.180	0.020	"	0.200		90.0	70-130			
Benzo (b) fluoranthene	0.186	0.020	"	0.200		92.9	70-130			
Benzo (g,h,i) perylene	0.174	0.020	"	0.200		87.0	70-130			
Benzo (k) fluoranthene	0.184	0.020	"	0.200		91.9	70-130			
Chrysene	0.191	0.020	"	0.200		95.6	70-130			
Dibenz (a,h) anthracene	0.194	0.020	"	0.200		96.9	70-130			
Fluoranthene	0.187	0.020	"	0.200		93.7	70-130			
Fluorene	0.180	0.020	"	0.200		90.2	70-130			
Indeno (1,2,3-cd) pyrene	0.174	0.020	"	0.200		87.1	70-130			
Naphthalene	0.179	0.002	"	0.200		89.6	70-130			
Phenanthrene	0.180	0.020	"	0.200		90.0	70-130			
Pyrene	0.161	0.020	"	0.200		80.4	70-130			

Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		101	60-130			
Surrogate: Pyrene-d10	180		"	200		90.3	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.2	60-130			

**Matrix Spike (B4E1425-MS1)**

**Source: Y405336-01**

Prepared: 05/14/2024 Analyzed: 05/17/2024

1-Methylnaphthalene	0.193	0.002	mg/kg	0.200	ND	96.6	70-130			
2-Methylnaphthalene	0.193	0.002	"	0.200	ND	96.5	70-130			
Acenaphthene	0.194	0.020	"	0.200	ND	96.9	70-130			
Anthracene	0.193	0.020	"	0.200	ND	96.6	70-130			
Benzo (a) anthracene	0.201	0.005	"	0.200	ND	100	70-130			
Benzo (a) pyrene	0.188	0.020	"	0.200	ND	94.1	70-130			
Benzo (b) fluoranthene	0.199	0.020	"	0.200	0.0003	99.4	70-130			
Benzo (g,h,i) perylene	0.190	0.020	"	0.200	ND	95.2	70-130			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1425 - EPA 3580**

Matrix Spike (B4E1425-MS1)	Source: Y405336-01				Prepared: 05/14/2024 Analyzed: 05/17/2024					
Benzo (k) fluoranthene	0.183	0.020	mg/kg	0.200	0.0005	91.2	70-130			
Chrysene	0.204	0.020	"	0.200	ND	102	70-130			
Dibenz (a,h) anthracene	0.216	0.020	"	0.200	ND	108	70-130			
Fluoranthene	0.203	0.020	"	0.200	ND	101	70-130			
Fluorene	0.200	0.020	"	0.200	ND	100	70-130			
Indeno (1,2,3-cd) pyrene	0.187	0.020	"	0.200	ND	93.5	70-130			
Naphthalene	0.191	0.002	"	0.200	ND	95.7	70-130			
Phenanthrene	0.192	0.020	"	0.200	ND	96.0	70-130			
Pyrene	0.172	0.020	"	0.200	ND	85.9	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		99.5	60-130			
Surrogate: Pyrene-d10	180		"	200		87.6	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		94.8	60-130			

Matrix Spike Dup (B4E1425-MSD1)	Source: Y405336-01				Prepared: 05/14/2024 Analyzed: 05/16/2024					
1-Methylnaphthalene	0.193	0.002	mg/kg	0.200	ND	96.5	70-130	0.136	20	
2-Methylnaphthalene	0.192	0.002	"	0.200	ND	96.2	70-130	0.355	20	
Acenaphthene	0.193	0.020	"	0.200	ND	96.6	70-130	0.317	20	
Anthracene	0.194	0.020	"	0.200	ND	96.9	70-130	0.389	20	
Benzo (a) anthracene	0.192	0.005	"	0.200	ND	95.8	70-130	4.70	20	
Benzo (a) pyrene	0.190	0.020	"	0.200	ND	95.1	70-130	1.07	20	
Benzo (b) fluoranthene	0.200	0.020	"	0.200	0.0003	100	70-130	0.708	20	
Benzo (g,h,i) perylene	0.189	0.020	"	0.200	ND	94.6	70-130	0.693	20	
Benzo (k) fluoranthene	0.186	0.020	"	0.200	0.0005	92.8	70-130	1.74	20	
Chrysene	0.202	0.020	"	0.200	ND	101	70-130	0.831	20	
Dibenz (a,h) anthracene	0.215	0.020	"	0.200	ND	108	70-130	0.269	20	
Fluoranthene	0.206	0.020	"	0.200	ND	103	70-130	1.39	20	

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1425 - EPA 3580**

<b>Matrix Spike Dup (B4E1425-MSD1)</b>		<b>Source: Y405336-01</b>			Prepared: 05/14/2024 Analyzed: 05/16/2024					
Fluorene	0.195	0.020	mg/kg	0.200	ND	97.5	70-130	2.59	20	
Indeno (1,2,3-cd) pyrene	0.196	0.020	"	0.200	ND	97.8	70-130	4.46	20	
Naphthalene	0.191	0.002	"	0.200	ND	95.4	70-130	0.365	20	
Phenanthrene	0.195	0.020	"	0.200	ND	97.4	70-130	1.51	20	
Pyrene	0.171	0.020	"	0.200	ND	85.6	70-130	0.344	20	
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	200		"	200		100	60-130			
Surrogate: Pyrene-d10	180		"	200		87.6	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		95.6	60-130			

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

**Batch B4E1410 - DTPA Sorbitol Preparation**

**Blank (B4E1410-BLK1)**

Prepared: 05/14/2024 Analyzed: 05/15/2024

Boron ND 0.100 mg/L

**Duplicate (B4E1410-DUP1)**

Source: Y405360-01

Prepared: 05/14/2024 Analyzed: 05/15/2024

Boron 0.0575 0.0992 mg/L 0.0553 3.95 50

**Batch B4E1415 - Saturated Paste Metals**

**Blank (B4E1415-BLK1)**

Prepared: 05/14/2024 Analyzed: 05/15/2024

Calcium PPM ND 10.0 mg/L

SAR ND 0.0100 SAR

Magnesium PPM ND 10.0 mg/L

Sodium PPM ND 10.0 "

**Duplicate (B4E1415-DUP1)**

Source: Y405360-01

Prepared: 05/14/2024 Analyzed: 05/15/2024

SAR ND 0.0100 SAR 0.116 200

Calcium PPM 18.0 10.0 mg/L 16.3 9.97 50

Magnesium PPM 2.53 10.0 " 2.31 9.09 50

Sodium PPM 2.25 10.0 " 1.89 17.4 50

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

**Batch B4E1420 - Saturated Paste pH/EC**

**Blank (B4E1420-BLK1)**

Prepared: 05/14/2024 Analyzed: 05/15/2024

Specific Conductance (EC) ND 0.00500 mmhos/cm

**Duplicate (B4E1420-DUP1)**

**Source: Y405360-01**

Prepared: 05/14/2024 Analyzed: 05/15/2024

pH	7.93		pH Units		7.90			0.379	25	
Specific Conductance (EC)	0.149	0.00500	mmhos/cm		0.138			7.82	25	

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Total Metals by 7196A - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2612252 - SW846 3060A</b>										
<b>BLANK (1205733991-BLK)</b>					Prepared: 05/15/2024 Analyzed: 05/17/2024					
Hexavalent Chromium	ND	0.392	mg/kg				-			U
<b>LCS (1205733992-BKS)</b>					Prepared: 05/15/2024 Analyzed: 05/17/2024					
Hexavalent Chromium	3.74	0.375	mg/kg	3.75		99.7	80-120			
<b>DUP (1205733993 D)</b>					Source: 667382001 Prepared: 05/15/2024 Analyzed: 05/17/2024					
Hexavalent Chromium	ND	0.392	mg/kg dry		<0.157		0-50	N/A	50	U
<b>MS (1205733994 S)</b>					Source: 667382001 Prepared: 05/15/2024 Analyzed: 05/17/2024					
Hexavalent Chromium	3.74	0.392	mg/kg dry	3.92	<0.157	93.7	75-125			
<b>DUP (1205733995 D)</b>					Source: Y405360-04 Prepared: 05/15/2024 Analyzed: 05/17/2024					
Hexavalent Chromium	ND	0.245	mg/kg dry		<0.0980		0-50	N/A	50	U
<b>MS (1205733996 S)</b>					Source: Y405360-04 Prepared: 05/15/2024 Analyzed: 05/17/2024					
Hexavalent Chromium	2380	0.245	mg/kg dry	2.45	<0.0980	NR	75-125			
<b>ILCS (1205733997-ILCS)</b>					Prepared: 05/15/2024 Analyzed: 05/17/2024					
Hexavalent Chromium	8.43	0.391	mg/kg	7.97		106	80-120			

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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Pioneer USX #Y07-08D

---

**Notes and Definitions**

Ua Sample is Non-Detect.

U Result not detected above the detection 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.*



June 18, 2024

Eagle Environmental Consulting, LLC

Andrew Newberry

8000 W 44th Ave

Wheat Ridge CO 80033

Project Name - Noble - Pioneer USX #Y07-08D

Project Number - [none]

Attached are your analytical results for Noble - Pioneer USX #Y07-08D received by Origins Laboratory, Inc. May 13, 2024. This project is associated with Origins project number Y405399-01.

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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Pioneer USX #Y07-08D

CROSS REFERENCE REPORT

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL05@4'	Y405399-01	Soil	May 13, 2024 9:25	05/13/2024 17:03
FL07@4'	Y405399-02	Soil	May 13, 2024 9:50	05/13/2024 17:03

Chain of Custody Modification Request

On 6/3/2024, Garrett Krug from Eagle Environmental contacted Jordan Bynon via email regarding Y405399 requesting that Table 915 Metals be added to both samples. Requested modifications to the chain of custody were made by Jordan Bynon on 6/3/2024.

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

www.originslaboratory.com

4405399

**ORIGINS**  
 LABORATORY, INC

page | of |

Client: Eagle Environmental Consulting  
 Address: 8000 W 44th Ave  
 Wheat Ridge, CO 80033  
 Telephone Number: 303-493-0479  
 Email Address: anewberry@eagle-environ.com

Project Manager: Andrew Newberry  
 Project Name: Pioneer USX #Y07-08D  
 Project Number: \_\_\_\_\_  
 Samples Collected By: RS

Fax: 303.265.9645 | Phone: 303.433.1322

Sample ID Description	Date Sampled	Time Sampled	# of Containers	Preservative				Matrix			Analysis				Sample Instructions
				Unpreserved	HCl	HNO <sub>3</sub>	Other	Groundwater	Soil	Air Summa #	Other	GC/MS/IC/ANION	IMS - GC/MS	PAHs - GC/MS SIM	
FLO5e4	5/13/24	915	3	X				X				X	X	X	EC, SAR, pH = 1
FLO7e4	↓	950	3	X				X				X	X	X	Saturated pore prep 2
															3
															4
															MDLs needed
															5
															6
															7
															8
															9
															10

Relinquished by: *[Signature]*  
 Date: 5/13/24 Time: 1703

Received by: *[Signature]*  
 Date: 5/13/24 Time: 1703

Date Results Needed: *None*

Temp Received: *6.3*

*Bill to Wade*

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

Origins Laboratory

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

**Sample Receipt Checklist**

Origins Work Order: 405399 Client: Eagle  
 Client Project ID: Pioneer USX #407-07C  
 Checklist Completed by: JTH/EAH Shipped Via: HLV  
 Date/time completed: 5/14/12 (UPS, FedEx, Hand Delivered, Pick-up, etc.)  
 Airbill #: N/A  
 Matrix(s) Received: (Check all that apply):  Soil/Solid  Water  Other: \_\_\_\_\_  
 Cooler Number/Temperature: 143 °C / \_\_\_\_\_ °C / \_\_\_\_\_ °C (Describe)  
 Thermometer ID: 7005

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 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)			<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)

Date/Time Reviewed

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL05@4'**

**5/13/2024 9:25:00AM**

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

**Origins Laboratory, Inc.**  
**Y405399-01 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	0.192		0.0988	mg/L	1	B4E1513	05/15/2024	05/16/2024	
-------	-------	--	--------	------	---	---------	------------	------------	--

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4E1401	05/14/2024	05/17/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	97.4 %		50-150			"	"	"	
------------------------	--------	--	--------	--	--	---	---	---	--

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4E1433	05/14/2024	05/15/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Naphthalene	ND		0.00380	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL05@4'**  
**5/13/2024 9:25:00AM**

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

**Origins Laboratory, Inc.**  
**Y405399-01 (Soil)**

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	107 %		70-130			B4E14 33	05/14/2024	05/15/2024	
Surrogate: Toluene-d8	98.2 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	108 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	2.01		0.499	meq/L	10	[CALC]	05/14/2024	05/15/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL05@4'**

**5/13/2024 9:25:00AM**

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

**Origins Laboratory, Inc.**  
**Y405399-01 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND		0.020	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
Fluorene	ND		0.020	"	"	"	"	"	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	101 %		60-130			"	"	"	
Surrogate: Anthracene-d10	98.6 %		60-130			"	"	"	
Surrogate: Pyrene-d10	86.8 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	94.5 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	8.33			pH Units	1	B4E1420	05/14/2024	05/15/2024	
----	------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	0.185		0.0100	SAR	1	B4E1415	05/14/2024	05/15/2024	
-----	-------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	0.278		0.00500	mmhos/cm	1	B4E1420	05/14/2024	05/15/2024	
---------------------------	-------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL05@4'**

**5/13/2024 9:25:00AM**

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

**Origins Laboratory, Inc.**  
**Y405399-01 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	3.19		0.244	mg/kg	10	B4F0331	06/03/2024	06/04/2024	
Barium	73.1		8.41	"	"	"	"	"	
Cadmium	0.107		0.0841	"	"	"	"	"	
Copper	ND		8.41	"	"	"	"	"	
Lead	5.95		0.841	"	"	"	"	"	
Nickel	5.89		0.841	"	"	"	"	"	
Selenium	ND		0.219	"	"	"	"	"	
Silver	ND		0.0841	"	"	"	"	"	
Zinc	ND		31.1	"	"	"	"	"	

**Total Metals 7196A**

Hexavalent Chromium	ND	0.119	0.298	mg/kg dry	1	2624460	06/12/2024	06/12/2024	U
---------------------	----	-------	-------	-----------	---	---------	------------	------------	---

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL07@4'**

**5/13/2024 9:50:00AM**

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

**Origins Laboratory, Inc.**  
**Y405399-02 (Soil)**

**Boron (DTPA Sorbitol)**

Boron	ND		0.100	mg/L	1	B4E1513	05/15/2024	05/16/2024	
-------	----	--	-------	------	---	---------	------------	------------	--

**DRO/ORO by EPA 8015D**

Diesel (C10-C28)	ND		25.0	mg/kg	1	B4E1401	05/14/2024	05/17/2024	Ua
Residual Range Organics (C28-C40)	ND		100	"	"	"	"	"	Ua

Surrogate: o-Terphenyl	101 %		50-150			"	"	"	
------------------------	-------	--	--------	--	--	---	---	---	--

**GBTEX+TMBs by 8260D**

1,2,4-Trimethylbenzene	ND		0.00200	mg/kg	1	B4E1433	05/14/2024	05/15/2024	Ua
1,3,5-Trimethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Benzene	ND		0.00200	"	"	"	"	"	Ua
Ethylbenzene	ND		0.00200	"	"	"	"	"	Ua
Naphthalene	ND		0.00380	"	"	"	"	"	Ua
Toluene	ND		0.00200	"	"	"	"	"	Ua
Xylenes, total	ND		0.00200	"	"	"	"	"	Ua
Gasoline Range Hydrocarbons	ND		0.200	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

FL07@4'  
 5/13/2024 9:50:00AM

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

**Origins Laboratory, Inc.**  
 Y405399-02 (Soil)

**GBTEX+TMBs by 8260D**

Surrogate: 1,2-Dichloroethane-d4	104 %		70-130			B4E14 33	05/14/2024	05/15/2024	
Surrogate: Toluene-d8	98.7 %		70-130			"	"	"	
Surrogate: 4-Bromofluorobenzene	109 %		70-130			"	"	"	

**Metals by Saturated Paste by EPA 6010**

Calcium	ND		0.499	meq/L	10	[CALC]	05/14/2024	05/15/2024	
Magnesium	ND		0.823	"	"	"	"	"	
Sodium	ND		0.435	"	"	"	"	"	

**PAH by EPA 8270E**

1-Methylnaphthalene	ND		0.002	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
2-Methylnaphthalene	ND		0.002	"	"	"	"	"	Ua
Acenaphthene	ND		0.020	"	"	"	"	"	Ua
Anthracene	ND		0.020	"	"	"	"	"	Ua
Benzo (a) anthracene	ND		0.005	"	"	"	"	"	Ua
Benzo (a) pyrene	ND		0.020	"	"	"	"	"	Ua
Benzo (b) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Benzo (k) fluoranthene	ND		0.020	"	"	"	"	"	Ua
Chrysene	ND		0.020	"	"	"	"	"	Ua
Dibenz (a,h) anthracene	ND		0.020	"	"	"	"	"	Ua

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL07@4'**

**5/13/2024 9:50:00AM**

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

**Origins Laboratory, Inc.**  
**Y405399-02 (Soil)**

**PAH by EPA 8270E**

Fluoranthene	ND		0.020	mg/kg	1	B4E1425	05/14/2024	05/16/2024	Ua
Fluorene	ND		0.020	"	"	"	"	"	Ua
Indeno (1,2,3-cd) pyrene	ND		0.020	"	"	"	"	"	Ua
Pyrene	ND		0.020	"	"	"	"	"	Ua

Surrogate: Fluorene-d10	102 %		60-130			"	"	"	
Surrogate: Anthracene-d10	100 %		60-130			"	"	"	
Surrogate: Pyrene-d10	86.8 %		60-130			"	"	"	
Surrogate: Benzo (a) pyrene-d12	97.8 %		60-130			"	"	"	

**pH in Soil by 9045D**

pH	<b>7.94</b>			pH Units	1	B4E1420	05/14/2024	05/15/2024	
----	-------------	--	--	----------	---	---------	------------	------------	--

**SAR by 20B Saturated Paste**

SAR	<b>0.166</b>		0.0100	SAR	1	B4E1415	05/14/2024	05/15/2024	
-----	--------------	--	--------	-----	---	---------	------------	------------	--

**Specific Conductance Mod. 9050A**

Specific Conductance (EC)	<b>0.0661</b>		0.00500	mmhos/cm	1	B4E1420	05/14/2024	05/15/2024	
---------------------------	---------------	--	---------	----------	---	---------	------------	------------	--

**Table 915 metals by EPA 6020B**

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**FL07@4'**

**5/13/2024 9:50:00AM**

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

**Origins Laboratory, Inc.**  
**Y405399-02 (Soil)**

**Table 915 metals by EPA 6020B**

Arsenic	1.59		0.251	mg/kg	10	B4F0331	06/03/2024	06/04/2024	
Barium	29.6		8.64	"	"	"	"	"	
Cadmium	ND		0.0864	"	"	"	"	"	
Copper	ND		8.64	"	"	"	"	"	
Lead	3.10		0.864	"	"	"	"	"	
Nickel	2.51		0.864	"	"	"	"	"	
Selenium	ND		0.225	"	"	"	"	"	
Silver	ND		0.0864	"	"	"	"	"	
Zinc	ND		32.0	"	"	"	"	"	

**Total Metals 7196A**

Hexavalent Chromium	0.147	0.128	0.321	mg/kg dry	1	2624460	06/12/2024	06/12/2024	J
---------------------	-------	-------	-------	-----------	---	---------	------------	------------	---

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
<b>Batch B4E1401 - EPA 3550B</b>										
<b>Blank (B4E1401-BLK1)</b>										
					Prepared: 05/14/2024 Analyzed: 05/17/2024					
Diesel (C10-C28)	ND	25.0	mg/kg							Ua
Residual Range Organics (C28-C40)	ND	100	"							Ua
Surrogate: o-Terphenyl	24		"	24.9		97.0	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1401 - EPA 3550B**

**LCS (B4E1401-BS1)**

Prepared: 05/14/2024 Analyzed: 05/17/2024

Diesel (C10-C28)	901	50.0	mg/kg	1000		90.1	70-130			
Residual Range Organics (C28-C40)	948	200	"	1000		94.8	70-130			
Surrogate: o-Terphenyl	58		"	49.8		116	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1401 - EPA 3550B**

<b>Matrix Spike (B4E1401-MS1)</b>	<b>Source: Y405341-01</b>			<b>Prepared: 05/14/2024 Analyzed: 05/17/2024</b>						
Diesel (C10-C28)	871	50.0	mg/kg	1000	ND	87.1	70-130			
Residual Range Organics (C28-C40)	921	200	"	1000	ND	92.1	70-130			
Surrogate: o-Terphenyl	52		"	49.8		104	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
<b>Batch B4E1401 - EPA 3550B</b>										
<b>Matrix Spike Dup (B4E1401-MSD1)</b>		<b>Source: Y405341-01</b>			Prepared: 05/14/2024 Analyzed: 05/17/2024					
Diesel (C10-C28)	901	50.0	mg/kg	1000	ND	90.1	70-130	3.40	35	
Residual Range Organics (C28-C40)	958	200	"	1000	ND	95.8	70-130	3.98	35	
Surrogate: o-Terphenyl	52		"	49.8		105	50-150			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Extractable Petroleum Hydrocarbons by 8015D - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1433 - EPA 5030 (soil)**

**Blank (B4E1433-BLK1)**

Prepared: 05/14/2024 Analyzed: 05/15/2024

1,2,4-Trimethylbenzene	ND	0.00200	mg/kg							Ua
1,3,5-Trimethylbenzene	ND	0.00200	"							Ua
Benzene	ND	0.00200	"							Ua
Ethylbenzene	ND	0.00200	"							Ua
Naphthalene	ND	0.00380	"							Ua
Toluene	ND	0.00200	"							Ua
Xylenes, total	ND	0.00200	"							Ua
Gasoline Range Hydrocarbons	ND	0.200	"							Ua
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125	98.9		70-130			
Surrogate: Toluene-d8	0.12		"	0.125	97.8		70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125	105		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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

Batch B4E1433 - EPA 5030 (soil)

**LCS (B4E1433-BS1)**

Prepared: 05/14/2024 Analyzed: 05/15/2024

1,2,4-Trimethylbenzene	0.107	0.00200	mg/kg	0.100		107	70-130			
1,3,5-Trimethylbenzene	0.106	0.00200	"	0.100		106	70-130			
Benzene	0.101	0.00200	"	0.100		101	70-130			
Ethylbenzene	0.106	0.00200	"	0.100		106	70-130			
Naphthalene	0.110	0.00380	"	0.100		110	70-130			
Toluene	0.0990	0.00200	"	0.100		99.0	70-130			
o-Xylene	0.106	0.00200	"	0.100		106	70-130			
m,p-Xylene	0.206	0.00400	"	0.200		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		97.4	70-130			
Surrogate: Toluene-d8	0.12		"	0.125		99.8	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		101	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

Batch B4E1433 - EPA 5030 (soil)

Matrix Spike (B4E1433-MS1)	Source: Y405379-01			Prepared: 05/14/2024 Analyzed: 05/15/2024						
1,2,4-Trimethylbenzene	0.0996	0.00200	mg/kg	0.100	ND	99.6	70-130			
1,3,5-Trimethylbenzene	0.101	0.00200	"	0.100	ND	101	70-130			
Benzene	0.0895	0.00200	"	0.100	ND	89.5	70-130			
Ethylbenzene	0.100	0.00200	"	0.100	ND	100	70-130			
Naphthalene	0.0822	0.00380	"	0.100	ND	82.2	70-130			
Toluene	0.0913	0.00200	"	0.100	ND	91.3	70-130			
o-Xylene	0.0989	0.00200	"	0.100	ND	98.9	70-130			
m,p-Xylene	0.196	0.00400	"	0.200	ND	98.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.11		"	0.125		87.1	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		103	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

Batch B4E1433 - EPA 5030 (soil)

Matrix Spike Dup (B4E1433-MSD1)	Source: Y405379-01			Prepared: 05/14/2024 Analyzed: 05/15/2024						
1,2,4-Trimethylbenzene	0.110	0.00200	mg/kg	0.100	ND	110	70-130	9.87	20	
1,3,5-Trimethylbenzene	0.110	0.00200	"	0.100	ND	110	70-130	8.73	20	
Benzene	0.104	0.00200	"	0.100	ND	104	70-130	15.0	20	
Ethylbenzene	0.110	0.00200	"	0.100	ND	110	70-130	9.03	20	
Naphthalene	0.107	0.00380	"	0.100	ND	107	70-130	26.6	20	QR-02
Toluene	0.103	0.00200	"	0.100	ND	103	70-130	12.4	20	
o-Xylene	0.110	0.00200	"	0.100	ND	110	70-130	10.6	20	
m,p-Xylene	0.214	0.00400	"	0.200	ND	107	70-130	8.86	20	
Surrogate: 1,2-Dichloroethane-d4	0.12		"	0.125		95.9	70-130			
Surrogate: Toluene-d8	0.13		"	0.125		102	70-130			
Surrogate: 4-Bromofluorobenzene	0.13		"	0.125		102	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B4F0331 - EPA 3050B**

**Blank (B4F0331-BLK1)**

Prepared: 06/03/2024 Analyzed: 06/04/2024

Arsenic	ND	0.290	mg/kg							
Barium	ND	10.0	"							
Cadmium	ND	0.100	"							
Copper	ND	10.0	"							
Lead	ND	1.00	"							
Nickel	ND	1.00	"							
Selenium	ND	0.260	"							
Silver	ND	0.100	"							
Zinc	ND	37.0	"							

**LCS (B4F0331-BS1)**

Prepared: 06/03/2024 Analyzed: 06/04/2024

Arsenic	5.56	0.290	mg/kg	5.00		111	80-120			
Barium	540	10.0	"	500		108	80-120			
Cadmium	5.49	0.100	"	5.00		110	80-120			
Copper	55.0	10.0	"	50.0		110	80-120			
Lead	5.26	1.00	"	5.00		105	80-120			
Nickel	5.17	1.00	"	5.00		103	80-120			
Selenium	10.2	0.260	"	9.50		107	80-120			
Silver	5.25	0.100	"	5.00		105	80-120			
Zinc	50.9	37.0	"	50.0		102	80-120			

**Matrix Spike (B4F0331-MS1)**

Source: Y406017-02

Prepared: 06/03/2024 Analyzed: 06/04/2024

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch B4F0331 - EPA 3050B**

<b>Matrix Spike (B4F0331-MS1)</b>		<b>Source: Y406017-02</b>			Prepared: 06/03/2024 Analyzed: 06/04/2024					
Arsenic	8.89	0.250	mg/kg	4.31	4.29	107	75-125			
Barium	588	8.62	"	431	130	106	75-125			
Cadmium	4.58	0.0862	"	4.31	0.120	103	75-125			
Copper	50.7	8.62	"	43.1	7.84	99.5	75-125			
Lead	13.5	0.862	"	4.31	8.40	119	75-125			
Nickel	11.5	0.862	"	4.31	8.42	72.6	75-125			QM-07
Selenium	8.60	0.224	"	8.19	0.450	99.5	75-125			
Silver	4.32	0.0862	"	4.31	0.0247	99.7	75-125			
Zinc	66.4	31.9	"	43.1	26.7	92.3	75-125			

<b>Matrix Spike Dup (B4F0331-MSD1)</b>		<b>Source: Y406017-02</b>			Prepared: 06/03/2024 Analyzed: 06/04/2024					
Arsenic	9.35	0.263	mg/kg	4.53	4.29	112	75-125	5.05	20	
Barium	642	9.06	"	453	130	113	75-125	8.87	20	
Cadmium	5.23	0.0906	"	4.53	0.120	113	75-125	13.3	20	
Copper	56.2	9.06	"	45.3	7.84	107	75-125	10.3	20	
Lead	14.7	0.906	"	4.53	8.40	140	75-125	8.72	20	QM-07
Nickel	12.9	0.906	"	4.53	8.42	98.9	75-125	11.1	20	
Selenium	9.94	0.236	"	8.61	0.450	110	75-125	14.5	20	
Silver	4.82	0.0906	"	4.53	0.0247	106	75-125	11.0	20	
Zinc	73.5	33.5	"	45.3	26.7	103	75-125	10.1	20	

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1425 - EPA 3580**

**Blank (B4E1425-BLK1)**

Prepared: 05/14/2024 Analyzed: 05/16/2024

1-Methylnaphthalene	ND	0.002	mg/kg							Ua
2-Methylnaphthalene	ND	0.002	"							Ua
Acenaphthene	ND	0.020	"							Ua
Anthracene	ND	0.020	"							Ua
Benzo (a) anthracene	ND	0.005	"							Ua
Benzo (a) pyrene	ND	0.020	"							Ua
Benzo (b) fluoranthene	ND	0.020	"							Ua
Benzo (g,h,i) perylene	ND	0.020	"							Ua
Benzo (k) fluoranthene	ND	0.020	"							Ua
Chrysene	ND	0.020	"							Ua
Dibenz (a,h) anthracene	ND	0.020	"							Ua
Fluoranthene	ND	0.020	"							Ua
Fluorene	ND	0.020	"							Ua
Indeno (1,2,3-cd) pyrene	ND	0.020	"							Ua
Naphthalene	ND	0.002	"							Ua
Phenanthrene	ND	0.020	"							Ua
Pyrene	ND	0.020	"							Ua
Surrogate: Fluorene-d10	200		ug/kg	200		101	60-130			
Surrogate: Anthracene-d10	200		"	200		100	60-130			
Surrogate: Pyrene-d10	170		"	200		87.1	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		97.5	60-130			

**LCS (B4E1425-BS1)**

Prepared: 05/14/2024 Analyzed: 05/16/2024

1-Methylnaphthalene	0.180	0.002	mg/kg	0.200		90.1	70-130			
2-Methylnaphthalene	0.181	0.002	"	0.200		90.7	70-130			
Acenaphthene	0.178	0.020	"	0.200		88.9	70-130			
Anthracene	0.180	0.020	"	0.200		90.0	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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1425 - EPA 3580**

**LCS (B4E1425-BS1)**

Prepared: 05/14/2024 Analyzed: 05/16/2024

Benzo (a) anthracene	0.180	0.005	mg/kg	0.200		90.1	70-130			
Benzo (a) pyrene	0.180	0.020	"	0.200		90.0	70-130			
Benzo (b) fluoranthene	0.186	0.020	"	0.200		92.9	70-130			
Benzo (g,h,i) perylene	0.174	0.020	"	0.200		87.0	70-130			
Benzo (k) fluoranthene	0.184	0.020	"	0.200		91.9	70-130			
Chrysene	0.191	0.020	"	0.200		95.6	70-130			
Dibenz (a,h) anthracene	0.194	0.020	"	0.200		96.9	70-130			
Fluoranthene	0.187	0.020	"	0.200		93.7	70-130			
Fluorene	0.180	0.020	"	0.200		90.2	70-130			
Indeno (1,2,3-cd) pyrene	0.174	0.020	"	0.200		87.1	70-130			
Naphthalene	0.179	0.002	"	0.200		89.6	70-130			
Phenanthrene	0.180	0.020	"	0.200		90.0	70-130			
Pyrene	0.161	0.020	"	0.200		80.4	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		101	60-130			
Surrogate: Pyrene-d10	180		"	200		90.3	60-130			
Surrogate: Benzo (a) pyrene-d12	200		"	200		99.2	60-130			

**Matrix Spike (B4E1425-MS1)**

Source: Y405336-01

Prepared: 05/14/2024 Analyzed: 05/17/2024

1-Methylnaphthalene	0.193	0.002	mg/kg	0.200	ND	96.6	70-130			
2-Methylnaphthalene	0.193	0.002	"	0.200	ND	96.5	70-130			
Acenaphthene	0.194	0.020	"	0.200	ND	96.9	70-130			
Anthracene	0.193	0.020	"	0.200	ND	96.6	70-130			
Benzo (a) anthracene	0.201	0.005	"	0.200	ND	100	70-130			
Benzo (a) pyrene	0.188	0.020	"	0.200	ND	94.1	70-130			
Benzo (b) fluoranthene	0.199	0.020	"	0.200	0.0003	99.4	70-130			
Benzo (g,h,i) perylene	0.190	0.020	"	0.200	ND	95.2	70-130			

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

**Batch B4E1425 - EPA 3580**

<b>Matrix Spike (B4E1425-MS1)</b>		<b>Source: Y405336-01</b>			Prepared: 05/14/2024 Analyzed: 05/17/2024					
Benzo (k) fluoranthene	0.183	0.020	mg/kg	0.200	0.0005	91.2	70-130			
Chrysene	0.204	0.020	"	0.200	ND	102	70-130			
Dibenz (a,h) anthracene	0.216	0.020	"	0.200	ND	108	70-130			
Fluoranthene	0.203	0.020	"	0.200	ND	101	70-130			
Fluorene	0.200	0.020	"	0.200	ND	100	70-130			
Indeno (1,2,3-cd) pyrene	0.187	0.020	"	0.200	ND	93.5	70-130			
Naphthalene	0.191	0.002	"	0.200	ND	95.7	70-130			
Phenanthrene	0.192	0.020	"	0.200	ND	96.0	70-130			
Pyrene	0.172	0.020	"	0.200	ND	85.9	70-130			
Surrogate: Fluorene-d10	200		ug/kg	200		102	60-130			
Surrogate: Anthracene-d10	200		"	200		99.5	60-130			
Surrogate: Pyrene-d10	180		"	200		87.6	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		94.8	60-130			

<b>Matrix Spike Dup (B4E1425-MSD1)</b>		<b>Source: Y405336-01</b>			Prepared: 05/14/2024 Analyzed: 05/16/2024					
1-Methylnaphthalene	0.193	0.002	mg/kg	0.200	ND	96.5	70-130	0.136	20	
2-Methylnaphthalene	0.192	0.002	"	0.200	ND	96.2	70-130	0.355	20	
Acenaphthene	0.193	0.020	"	0.200	ND	96.6	70-130	0.317	20	
Anthracene	0.194	0.020	"	0.200	ND	96.9	70-130	0.389	20	
Benzo (a) anthracene	0.192	0.005	"	0.200	ND	95.8	70-130	4.70	20	
Benzo (a) pyrene	0.190	0.020	"	0.200	ND	95.1	70-130	1.07	20	
Benzo (b) fluoranthene	0.200	0.020	"	0.200	0.0003	100	70-130	0.708	20	
Benzo (g,h,i) perylene	0.189	0.020	"	0.200	ND	94.6	70-130	0.693	20	
Benzo (k) fluoranthene	0.186	0.020	"	0.200	0.0005	92.8	70-130	1.74	20	
Chrysene	0.202	0.020	"	0.200	ND	101	70-130	0.831	20	
Dibenz (a,h) anthracene	0.215	0.020	"	0.200	ND	108	70-130	0.269	20	
Fluoranthene	0.206	0.020	"	0.200	ND	103	70-130	1.39	20	

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**EPA 8270E (SW846) - Semivolatile Organic Compounds - Quality Control**  
**Origins Laboratory, Inc.**

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

Batch B4E1425 - EPA 3580

Matrix Spike Dup (B4E1425-MSD1)	Source: Y405336-01			Prepared: 05/14/2024 Analyzed: 05/16/2024						
Fluorene	0.195	0.020	mg/kg	0.200	ND	97.5	70-130	2.59	20	
Indeno (1,2,3-cd) pyrene	0.196	0.020	"	0.200	ND	97.8	70-130	4.46	20	
Naphthalene	0.191	0.002	"	0.200	ND	95.4	70-130	0.365	20	
Phenanthrene	0.195	0.020	"	0.200	ND	97.4	70-130	1.51	20	
Pyrene	0.171	0.020	"	0.200	ND	85.6	70-130	0.344	20	
Surrogate: Fluorene-d10	200		ug/kg	200		100	60-130			
Surrogate: Anthracene-d10	200		"	200		100	60-130			
Surrogate: Pyrene-d10	180		"	200		87.6	60-130			
Surrogate: Benzo (a) pyrene-d12	190		"	200		95.6	60-130			

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

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

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

**Batch B4E1415 - Saturated Paste Metals**

**Blank (B4E1415-BLK1)**

Prepared: 05/14/2024 Analyzed: 05/15/2024

SAR	ND	0.0100	SAR							
Calcium PPM	ND	10.0	mg/L							
Magnesium PPM	ND	10.0	"							
Sodium PPM	ND	10.0	"							

**Duplicate (B4E1415-DUP1)**

Source: Y405360-01

Prepared: 05/14/2024 Analyzed: 05/15/2024

SAR	ND	0.0100	SAR	0.116					200	
Calcium PPM	18.0	10.0	mg/L	16.3				9.97	50	
Magnesium PPM	2.53	10.0	"	2.31				9.09	50	
Sodium PPM	2.25	10.0	"	1.89				17.4	50	

**Batch B4E1513 - DTPA Sorbitol Preparation**

**Blank (B4E1513-BLK1)**

Prepared: 05/15/2024 Analyzed: 05/16/2024

Boron	ND	0.100	mg/L							
-------	----	-------	------	--	--	--	--	--	--	--

**Duplicate (B4E1513-DUP1)**

Source: Y405399-01

Prepared: 05/15/2024 Analyzed: 05/16/2024

Boron	0.181	0.0988	mg/L	0.192				5.82	50	
-------	-------	--------	------	-------	--	--	--	------	----	--

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**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 B4E1420 - Saturated Paste pH/EC</b>										
<b>Blank (B4E1420-BLK1)</b>					Prepared: 05/14/2024 Analyzed: 05/15/2024					
Specific Conductance (EC)	ND	0.00500	mmhos/cm							
<b>Duplicate (B4E1420-DUP1)</b>					<b>Source: Y405360-01</b> Prepared: 05/14/2024 Analyzed: 05/15/2024					
Specific Conductance (EC)	0.149	0.00500	mmhos/cm		0.138		7.82		25	
pH	7.93		pH Units		7.90		0.379		25	

Origins Laboratory, Inc.



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

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

Andrew Newberry  
 Project Number: [none]  
 Project: Noble - Pioneer USX #Y07-08D

**Total Metals 7196A - Quality Control**  
**GEL Laboratories, LLC**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
<b>Batch 2624460 - SW846 3060A</b>										
<b>BLANK (1205757402-BLK)</b>					Prepared: 06/12/2024 Analyzed: 06/12/2024					
Hexavalent Chromium	ND	0.399	mg/kg				-			U
<b>LCS (1205757403-BKS)</b>					Prepared: 06/12/2024 Analyzed: 06/12/2024					
Hexavalent Chromium	3.87	0.390	mg/kg	3.90		99.3	80-120			
<b>DUP (1205757404 D)</b>					Source: 670251001 Prepared: 06/12/2024 Analyzed: 06/12/2024					
Hexavalent Chromium	ND	0.324	mg/kg dry		<0.130		0-50	N/A	50	U
<b>MS (1205757405 S)</b>					Source: 670251001 Prepared: 06/12/2024 Analyzed: 06/12/2024					
Hexavalent Chromium	2.04	0.325	mg/kg dry	3.25	<0.130	61.7	75-125			
<b>DUP (1205757406 D)</b>					Source: 670416002 Prepared: 06/12/2024 Analyzed: 06/12/2024					
Hexavalent Chromium	ND	0.284	mg/kg dry		<0.113		0-50	N/A	50	U
<b>MS (1205757407 S)</b>					Source: 670416002 Prepared: 06/12/2024 Analyzed: 06/12/2024					
Hexavalent Chromium	2.54	0.284	mg/kg dry	2.84	<0.113	88.1	75-125			
<b>ILCS (1205757408-ILCS)</b>					Prepared: 06/12/2024 Analyzed: 06/12/2024					
Hexavalent Chromium	7.72	0.374	mg/kg	7.59		102	80-120			

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

Andrew Newberry  
Project Number: [none]  
Project: Noble - Pioneer USX #Y07-08D

---

### Notes and Definitions

Ua Sample is Non-Detect.

U Result not detected above the detection limit

QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.

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 Greater than the detection limit but less than the reporting 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.*

---

Jordan A. Bynon, Project Manager