



Facility Closure Investigation and Environmental Summary

D.L. Phillips 24-24 Wellhead

ECMC Remediation Project #35512

Weld County, Colorado

Attachments:

Figure 1 – General Location Map

Figure 2 – Wellhead Soil Sample and Field Screening Locations

Figure 3 – Supplemental Site Investigation Map

Table 1 – Soil Sample and Field Screening Location Information

Table 2 – Soil Analytical Results Summary Table – Volatile Organics

Table 3 – Soil Analytical Results Summary Table – PAHs

Table 4 – Soil Analytical Results Summary Table – Soil Suitability

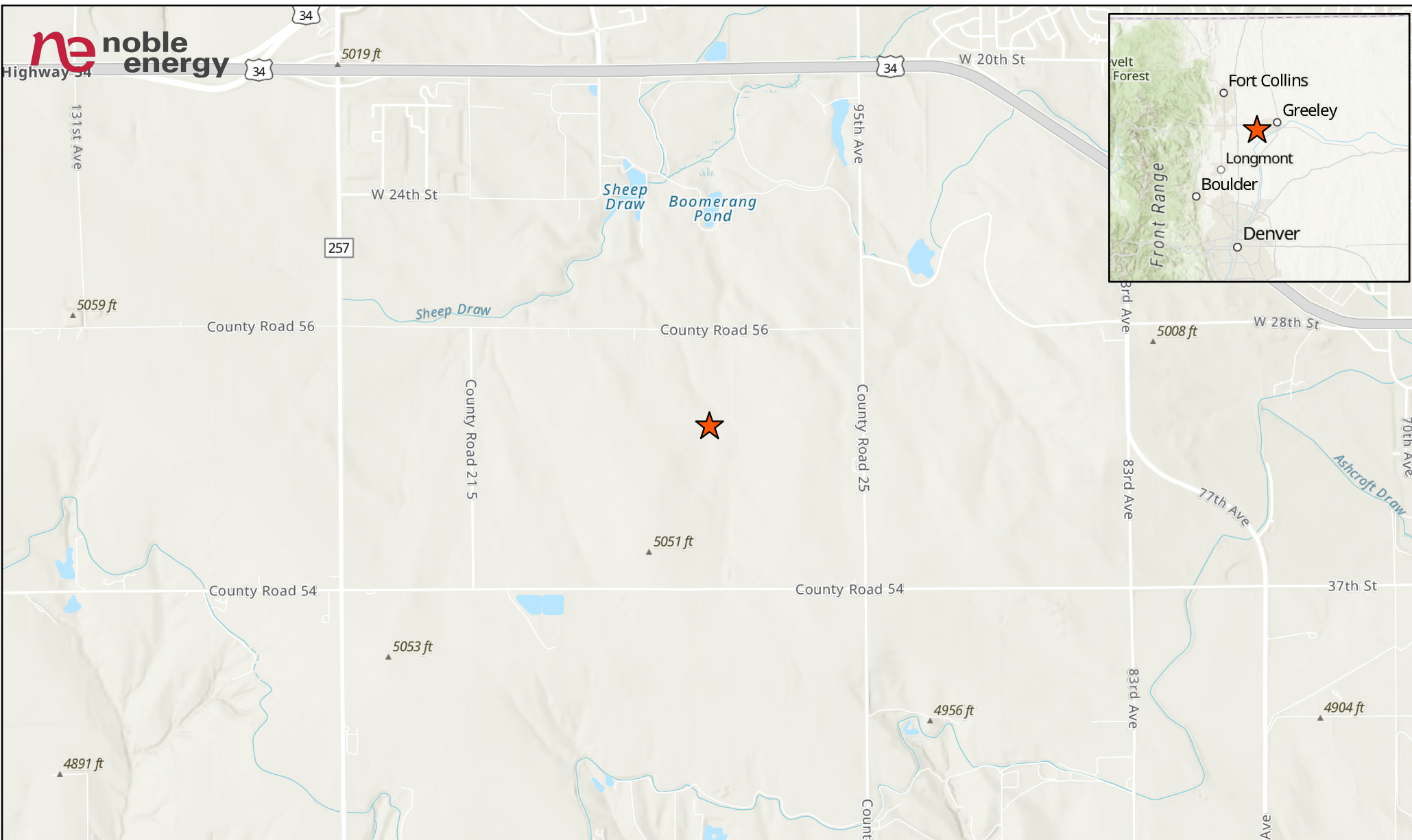
Table 5 – Soil Analytical Results Summary Table – Metals

Attachment A: Photographic Log

Attachment B: Facility Closure Checklists

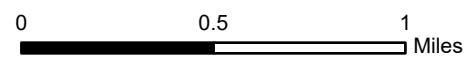
Attachment C: Field Form

FIGURES

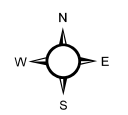


LEGEND

 Site Location



1 inch = 0.5 Mile



Project No:	024-386
Map By:	JW
Date:	09/09/2024

**D.L. PHILLIPS 24-24 WELLHEAD
GENERAL LOCATION MAP**
NOBLE ENERGY
SE 1/4 NW 1/4 SECTION 24
T5N R67W, 6TH PM
WELD COUNTY, COLORADO



1843 Sunlight Dr.
Longmont, CO 80504
303.378.4036

Figure
1

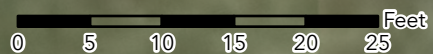
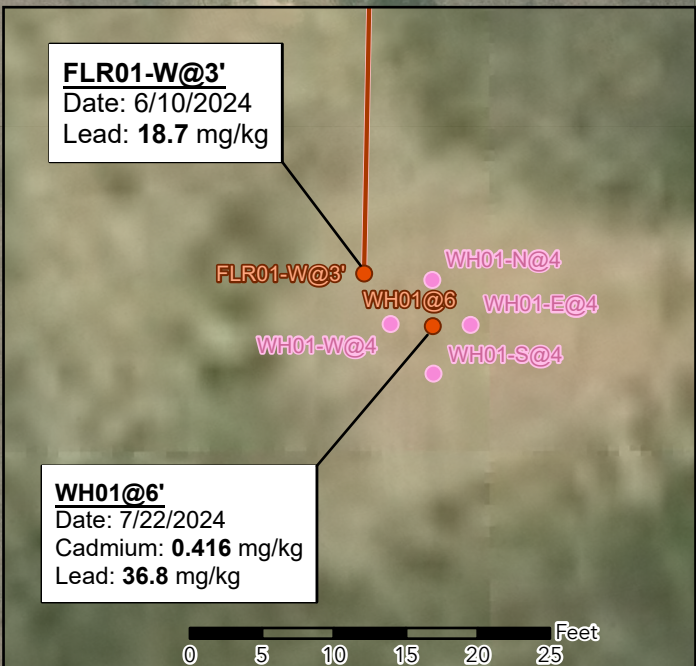


FL01-07@3'
Date: 6/11/2024
pH: 8.82

FL01-06@3'
Date: 6/11/2024
pH: 8.71

FLR01-W@3'
Date: 6/10/2024
Lead: 18.7 mg/kg

WH01@6'
Date: 7/22/2024
Cadmium: 0.416 mg/kg
Lead: 36.8 mg/kg



NOTE:
XXXX@X = Sample Name @ Depth in Feet
BOLD - Above ECMC Table 915-1 Standards
"mg/kg" = milligrams per kilogram



Figure 2 Soil Sample and Field Screening Locations Map

D.L. PHILLIPS 24-24
SENW-SEC 24-T5N-R67W
Weld County, Colorado
Noble Energy Inc.

- Soil Sample
- Background Sample
- Screening Point
- Flowline Removed

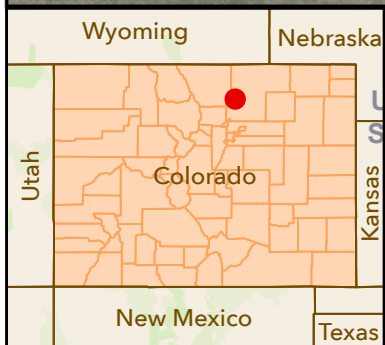
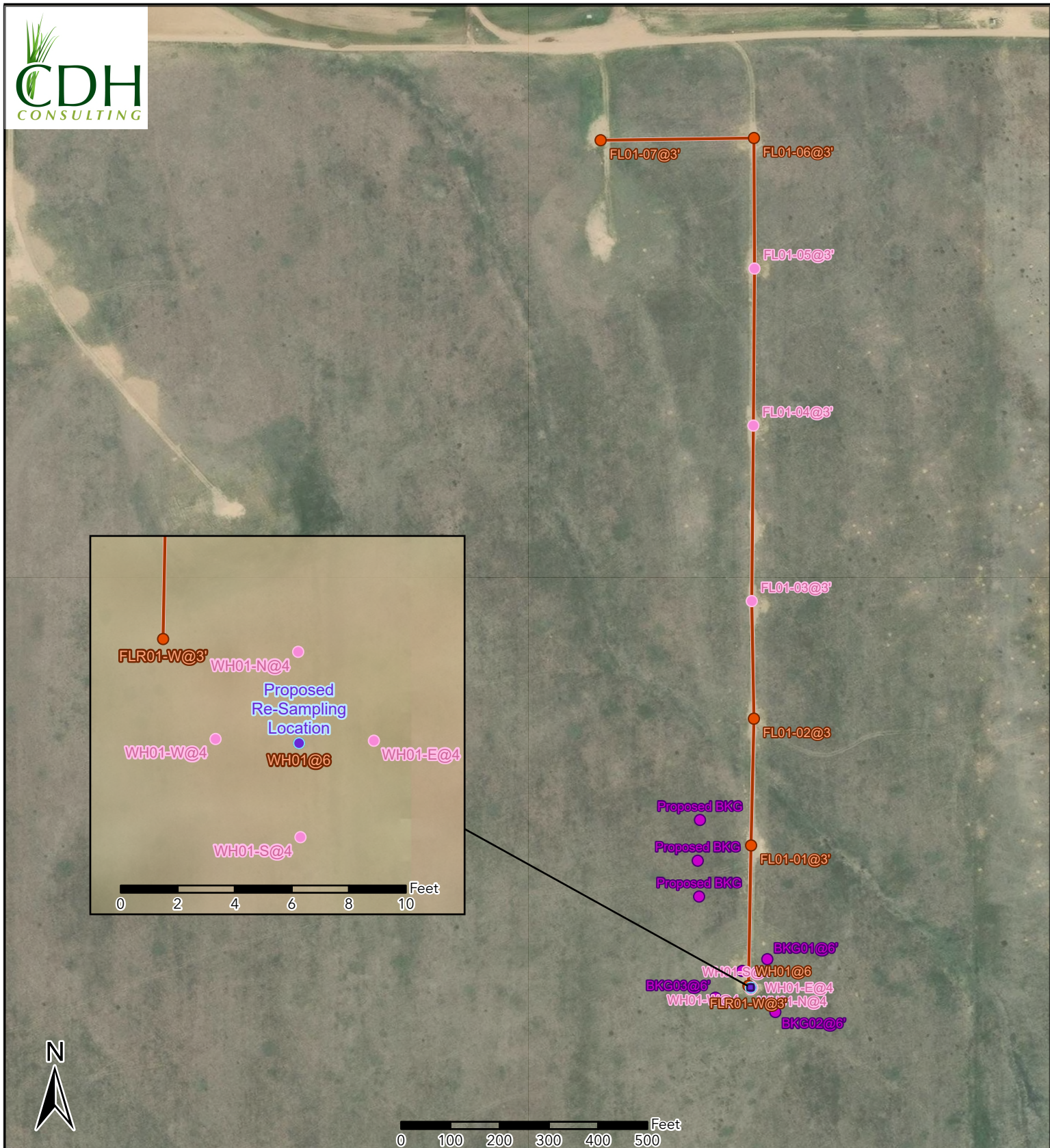


Figure 3
Supplemental Site Investigation Map
 D.L. PHILLIPS 24-24
 SENW-SEC 24-T5N-R67W
 Weld County, Colorado
 Noble Energy Inc.

- Site Location
- Soil Sample
- Background Sample
- Screening Point
- Proposed Re-Sample Soil Sample Location
- Flowline Removed

TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
D.L. PHILLIPS 24-24, WELD COUNTY, COLORADO
REM # 35512

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
WH01@6	7/22/2024	6	40.3868515	-104.84323	NM	0.0
WH01-N@4	7/22/2024	4	40.3868603	-104.84323	NM	0.0
WH01-S@4	7/22/2024	4	40.3868425	-104.84323	NM	0.0
WH01-W@4	7/22/2024	4	40.3868519	-104.84324	NM	0.0
WH01-E@4	7/22/2024	6	40.3868517	-104.84322	NM	0.0
BKG01@6'	6/2/2025	6	40.387003	-104.84310	0.900000	0.5
BKG02@6'	6/2/2025	6	40.386709	-104.84304	1.200000	0.5
BKG03@6'	6/2/2025	6	40.386789	-104.84348	1.100000	0.4
FL01-01@3'	6/10/2024	3	40.387638	-104.843216	1.200000	0.4
FL01-02@3'	6/10/2024	3	40.388345	-104.843194	1.200000	0.4
FL01-03@3'	6/10/2024	3	40.389001	-104.843208	1.100000	0.4
FL01-04@3'	6/11/2024	3	40.389980	-104.843194	1.000000	0.0
FL01-05@3'	6/11/2024	3	40.390856	-104.843184	1.100000	0.0
FL01-06@3'	6/11/2024	3	40.391584	-104.843186	1.000000	2.5
FL01-07@3'	6/11/2024	3	40.391573	-104.844304	0.800000	0.0
FLR01-W@3'	6/10/2024	3	40.386855	-104.843237	0.800000	0.5
BKG01@3'	6/10/2024	3	40.386938	-104.843283	2.500000	0.3

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

ft = Feet

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
D.L. PHILLIPS 24-24, WELD COUNTY, COLORADO
REM # 35512

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**		
WH01@6	7/22/2024	6	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002	<125.200	<0.200	<25.0	<100
FL01-01@3'	6/10/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-02@3'	6/10/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-06@3'	6/11/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-07@3'	6/11/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FLR01-W@3'	6/10/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

1. Bold values 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
- (<) = Analytical result is less than the indicated laboratory reporting limit.
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
TPH-DRO = Total petroleum hydrocarbons - diesel range organics
TPH-ORO = Total petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
ft = Feet
NA = Not analyzed

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
D.L. PHILLIPS 24-24, WELD COUNTY, COLORADO
REM # 35512

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
WH01@6	7/22/2024	6	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.003	0.003
FL01-01@3'	6/10/2024	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-02@3'	6/10/2024	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-06@3'	6/11/2024	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL01-07@3'	6/11/2024	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FLR01-W@3'	6/10/2024	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

1. Bold values 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
(<) = Analytical result is less than the indicated laboratory reporting limit.
mg/kg = Milligrams per kilogram
ft = Feet

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
D.L. PHILLIPS 24-24, WELD COUNTY, COLORADO
REM # 35512

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
WH01@6	7/22/2024	6	8.40	0.391	0.349	0.518
FL01-01@3'	6/10/2024	3	8.60	0.331	0.174	<2.00
FL01-02@3'	6/10/2024	3	8.18	0.300	0.297	<2.00
FL01-06@3'	6/11/2024	3	8.71	0.109	0.0813	<2.00
FL01-07@3'	6/11/2024	3	8.82	0.095	0.0516	<2.00
FLR01-W@3'	6/10/2024	3	8.45	0.316	0.251	<2.00
BKG01@3'	6/10/2024	3	8.55	0.488	1.01	NA
BKG01@6'	6/2/2025	6	9.15	0.399	3.07	0.386
BKG02@6'	6/2/2025	6	8.82	0.425	3.55	0.764
BKG03@6'	6/2/2025	6	8.80	0.521	4.43	1.02
Maximum Background Concentration			9.15	0.521	4.43	1.02

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
3. Brown highlighted soil analytical values indicate a regulatory exceedance.

NA = Not analyzed

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
D.L. PHILLIPS 24-24, WELD COUNTY, COLORADO
REM # 35512

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
WH01@6	7/22/2024	6	6.26	157	0.416	<0.167*	40.1	36.8	16.1	0.593	<0.0939	65.9
FL01-01@3'	6/10/2024	3	4.82	119	0.291	<0.30*	5.57	8.87	5.88	<0.260	0.0335	23.0
FL01-02@3'	6/10/2024	3	4.05	98.1	0.239	<0.30*	4.88	7.03	6.21	<0.260	0.0388	20.2
FL01-06@3'	6/11/2024	3	3.89	81.7	<0.200	<0.30*	4.63	5.87	5.85	<0.260	0.0297	19.0
FL01-07@3'	6/11/2024	3	4.75	91.7	0.253	<0.30*	4.93	7.36	6.44	<0.260	0.0463	23.5
FLR01-W@3'	6/10/2024	3	5.89	130	0.362	<0.30*	8.94	18.7	7.63	<0.234	0.0723	24.9
BKG01@3'	6/10/2024	3	6.03	144	0.444	<0.30*	6.40	9.51	7.60	<0.234	0.0654	24.1
BKG01@6'	6/2/2025	6	3.71	96.8	0.103	<0.200 *	<10.0	<10.0	<10.0	0.299	<0.500	<50.0
BKG02@6'	6/2/2025	6	5.93	155	0.257	<0.200 *	13.2	11.6	18.4	0.628	<0.500	57.8
BKG03@6'	6/2/2025	6	3.78	115	<0.100	<0.200 *	<10.0	<10.0	<10.0	0.268	<0.500	<50.0
1.25x Maximum Background Concentration			7.54	193.75	0.555	NA	16.50	14.50	23.00	0.785	0.0818	72.3

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.

2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.

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

4. Non-detect background results accounted for in the highest background concentration by using the reporting limit.

ECMC = Energy & Carbon Management Commission

(<) = Analytical result is less than the indicated laboratory reporting limit.

mg/kg = Milligrams per kilogram

ft = Feet

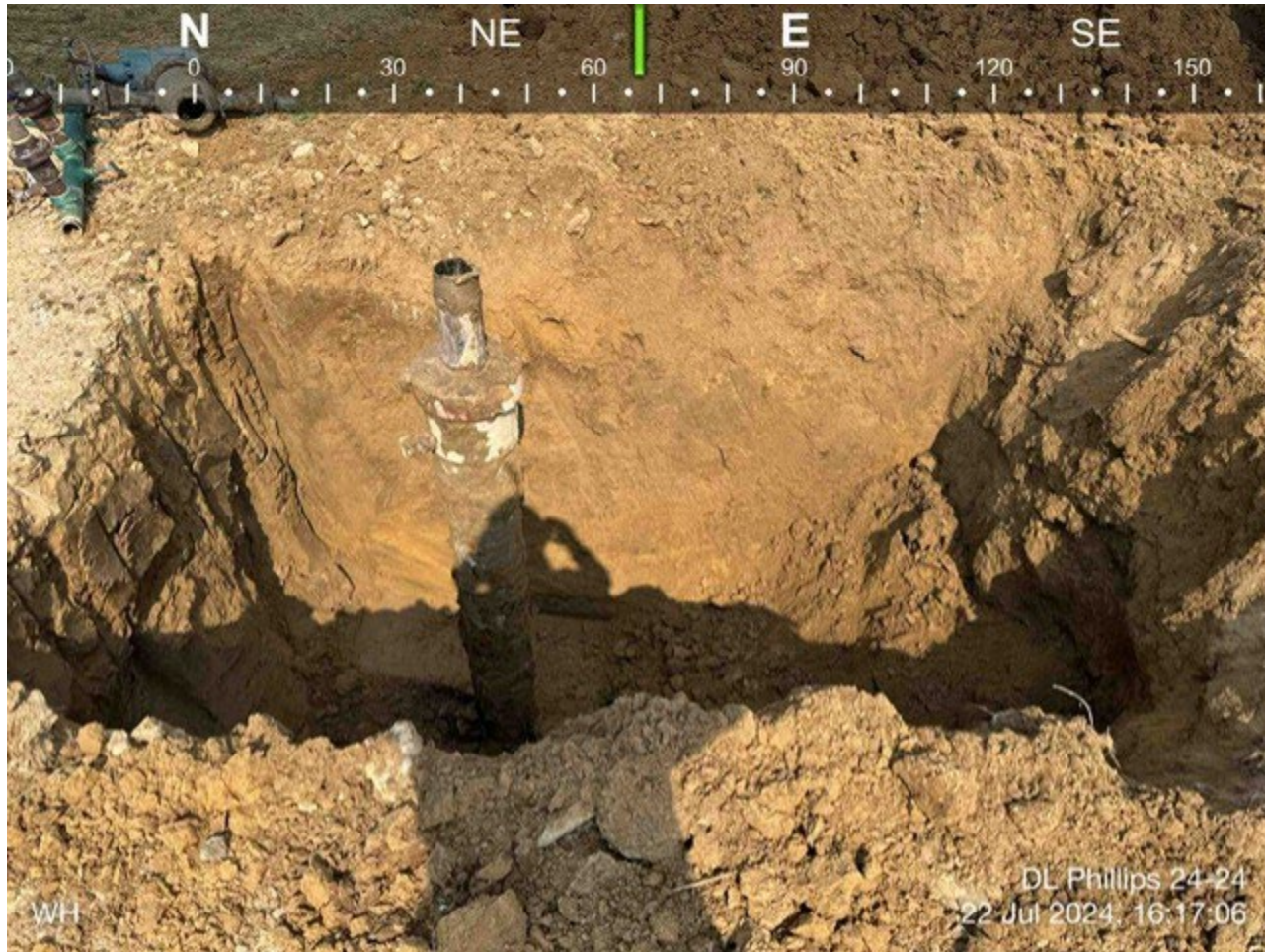
* Indicates laboratory minimum detection limit in excess of SSL

AP = Analysis pending

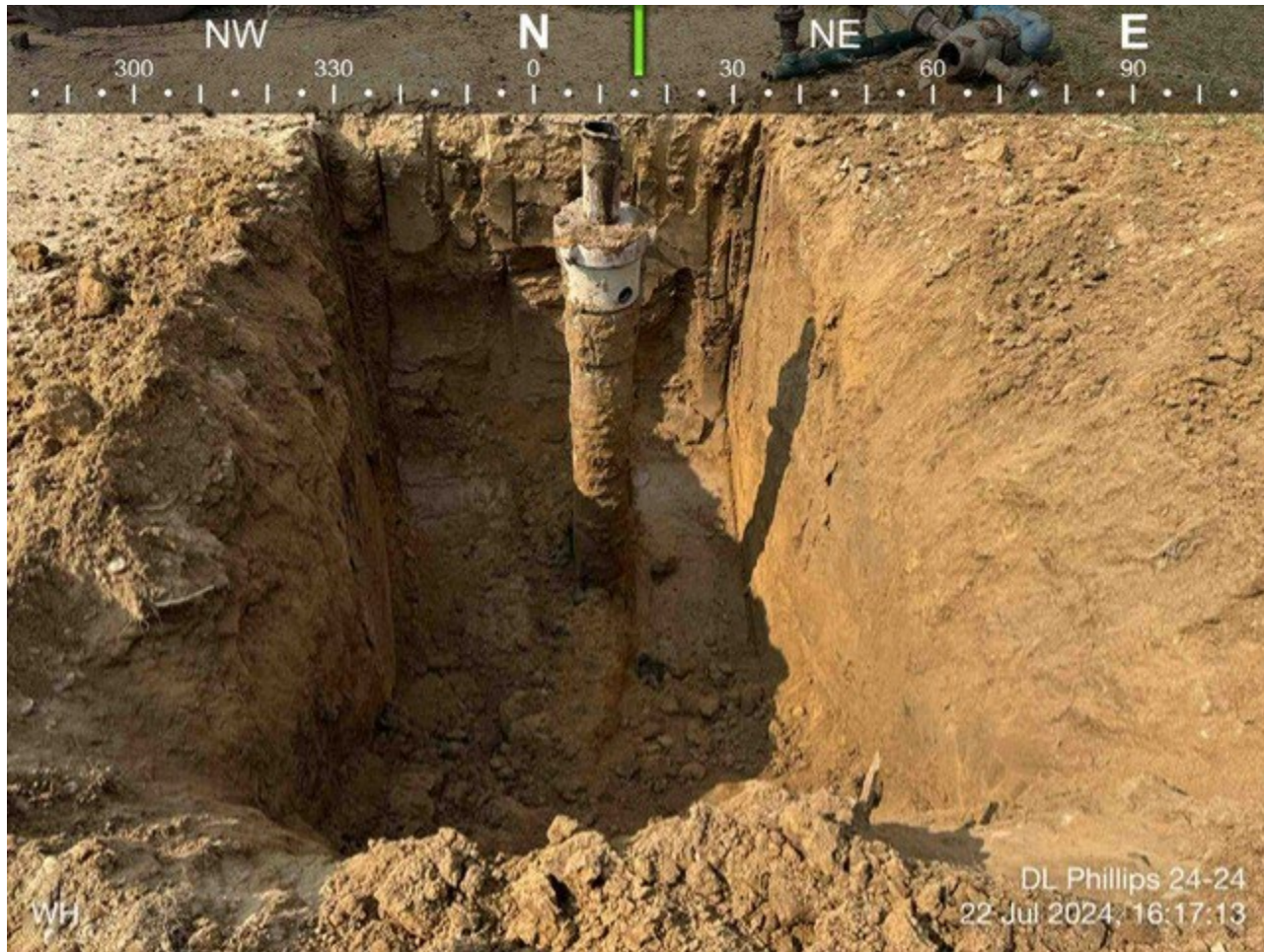
NA = Not analyzed

**ATTACHMENT A
PHOTOGRAPHIC LOG**

D.L. Phillips 24-24 Wellhead Photographic Log



D.L. Phillips 24-24 Wellhead Photographic Log



D.L. Phillips 24-24 Wellhead Photographic Log



D.L. Phillips 24-24 Wellhead Photographic Log



Photographic Log

D.L. PHILLIPS 24-24 – REM #35512

Noble Energy Inc.

6/2/2025



Photo 1: View of BKG01 sample location, facing south-southeast

Photographic Log
D.L. PHILLIPS 24-24 – REM #35512
Noble Energy Inc.
6/2/2025



Photo 2: View of BKG02 sample location, facing southeast

Photographic Log
D.L. PHILLIPS 24-24 – REM #35512
Noble Energy Inc.
6/2/2025



Photo 3: View of BKG03 sample location, facing east

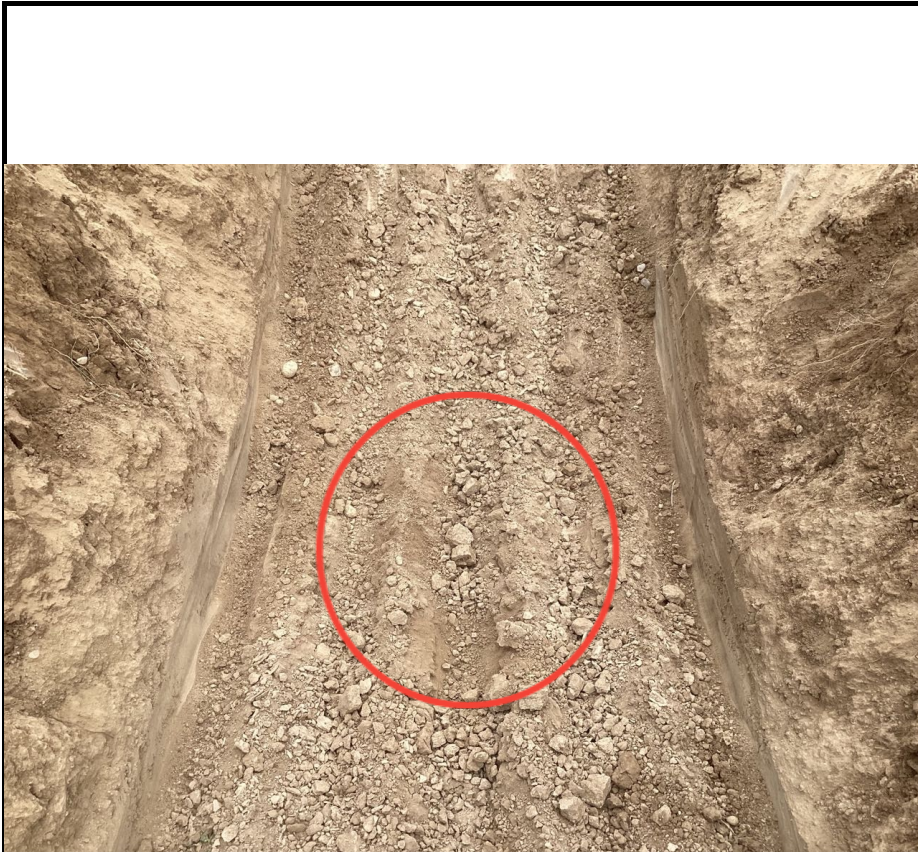


Equipment ID: FLR01-W		Equipment Type: Wellhead		Equipment ID: FL01-01		Equipment Type: Flowline	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			



Equipment ID: FL01-02		Equipment Type: Flowline	
Material:	Volume:	Contents:	
Notes/Conditions:			

Equipment ID: FL01-03		Equipment Type: Flowline	
Material:	Volume:	Contents:	
Notes/Conditions:			



Equipment ID: BKG01		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			

Equipment ID: FL01-04		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			



Equipment ID: FL01-05		Equipment Type:			Equipment ID: FL01-06		Equipment Type:		
Material:	Volume:	Contents:			Material:	Volume:	Contents:		
Notes/Conditions:					Notes/Conditions:				



Equipment ID: FL01-07		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

**ATTACHMENT B
FACILITY CLOSURE CHECKLISTS**

Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure		Tank Battery Closure		Flowline Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: D.L. Phillips 24-24, 256485		Date: 7/22/2024						Remediation Project #: 35512	
Associated Wells: N/A		Age of Site: 1/2/2000 - spud date						Number of Photos Attached: 4	
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)							40.386854 / -104.843230		
Estimated Facility Size (acres):							~0.01		
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)									
Overall good									
USCS Soil Type: SM				Estimated Depth to Groundwater: Unknown as none encountered					
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
None encountered or observed									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)									
None encountered or observed									
Wellhead(s)									
Well API	05-123-19879								
Age	1/2/00 - spud date								
Condition of surface around wellhead	Good								
PID Readings	0.0ppm								
Condition of subsurface (staining present)	Good								
PID Readings	0.0ppm								
Sample taken? Location/Sample ID#	WH01@6								
Photo Number(s)	1-4								
Other observations regarding wellheads:									
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:			5			Total number of samples collected:			
						5			
Highest PID Reading:			0.0ppm			Total number of samples submitted to lab for analysis:			
						1			
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation?									
<input checked="" type="radio"/> No			Yes - not impacted or in contact with impacted soils			Yes - groundwater impacted and/or in contact with impacted soils			
Measured depth to groundwater:				Was remedial groundwater removal conducted?					
				Yes No					
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater?				Volume of groundwater removed prior to sampling:					
Yes No									
Free product observed?				Volume of groundwater removed post sampling:					
Yes No									
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									

**ATTACHMENT C
FIELD FORM**



SITE NAME: PHILLIPS D L 24-24 Flowline							DATE: 6/10/2024	REM. PROJECT #: 35512	WEATHER: SUNNY 70		
SITE DIRECTIONS: OFF CR 56, SENW Sec: 24 Twp: 5N Range: 67W Meridian: 6							CLIENT: Noble				
LEGALS AND LAT/LONG: 40.386854, -104.84323							TASMAN PERSONNEL: SW				
SOIL TYPES: Clayey Sand - SC							SURFACE GRADIENT: North				
SOIL SAMPLING							FACILITY INFRASTRUCTURE				
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT	Quantity	Photo?		
							Above Ground Storage Tank (AST)				
6/10/2024 15:40	FLR01-W@3'	0.5	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel				
6/10/2024 15:45	FL01-01@3'	0.4	No Staining	No Odor	Yes	Lab	Separator				
6/10/2024 15:50	FL01-02@3'	0.4	No Staining	No Odor	Yes	Lab	Emission Control Device (ECD)				
6/10/2024 15:55	FL01-03@3'	0.4	No Staining	No Odor	Yes	Grab	Dump Line				
6/10/2024 16:00	BKG01@3'	0.3	No Staining	No Odor	Yes	Lab	Wellhead				
6/11/2024 09:59	FL01-04@3'	0.0	No Staining	No Odor	Yes	Grab	Flowline	1	✓		
6/11/2024 10:06	FL01-05@3'	0.0	No Staining	No Odor	Yes	Grab	Other:				
6/11/2024 10:20	FL01-06@3'	2.5	No Staining	No Odor	Yes	Lab	Soil Loads Removed				
6/11/2024 10:29	FL01-07@3'	0.0	No Staining	No Odor	Yes	Lab	IMPACTED SOIL IDENTIFIED?				
							ESTIMATED VOLUME OF IMPACTS:				
							Date	Number	CY		
							Total Removed	0	0		
							Disposal Facility:				
							Groundwater Recovery				
							DATE GW ENCOUNTERED:	DEPTH:			
							GROUNDWATER IN CONTACT WITH IMPACTED SOIL?				
							LNAPL OR SHEEN OBSERVED ON GW?				
GROUNDWATER SAMPLING							Date	BBLs			
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?					
							Total Removed	0			
							Disposal Facility:				

GENERAL OBSERVATION FORM

 Site Area/AOC: PHILLIPS 24-24 Client: Noble

 Daily Forecast/Weather: SUNNY 70 Personnel: SW

 Task/Location Description: Decommissioning

Time	Description
15:00	Arrived on site
	Began sampling activities
16:49	Finished sampling activities and left site
	BKG01: Tan, sandy clay, fine grain, low plasticity, dry no odor/staining
09:30	Arrived on site and began JSA
09:45	Began sampling activity
10:30	Left current site
	Previous water crossing under flowline
	connects to 24-21 (common trenched)
	Two significant turns within the flowline

 Need photo log?