



Facility Closure Investigation and Environmental Summary

UPRC 23-1117 Wellhead

ECMC Remediation Project #35496

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

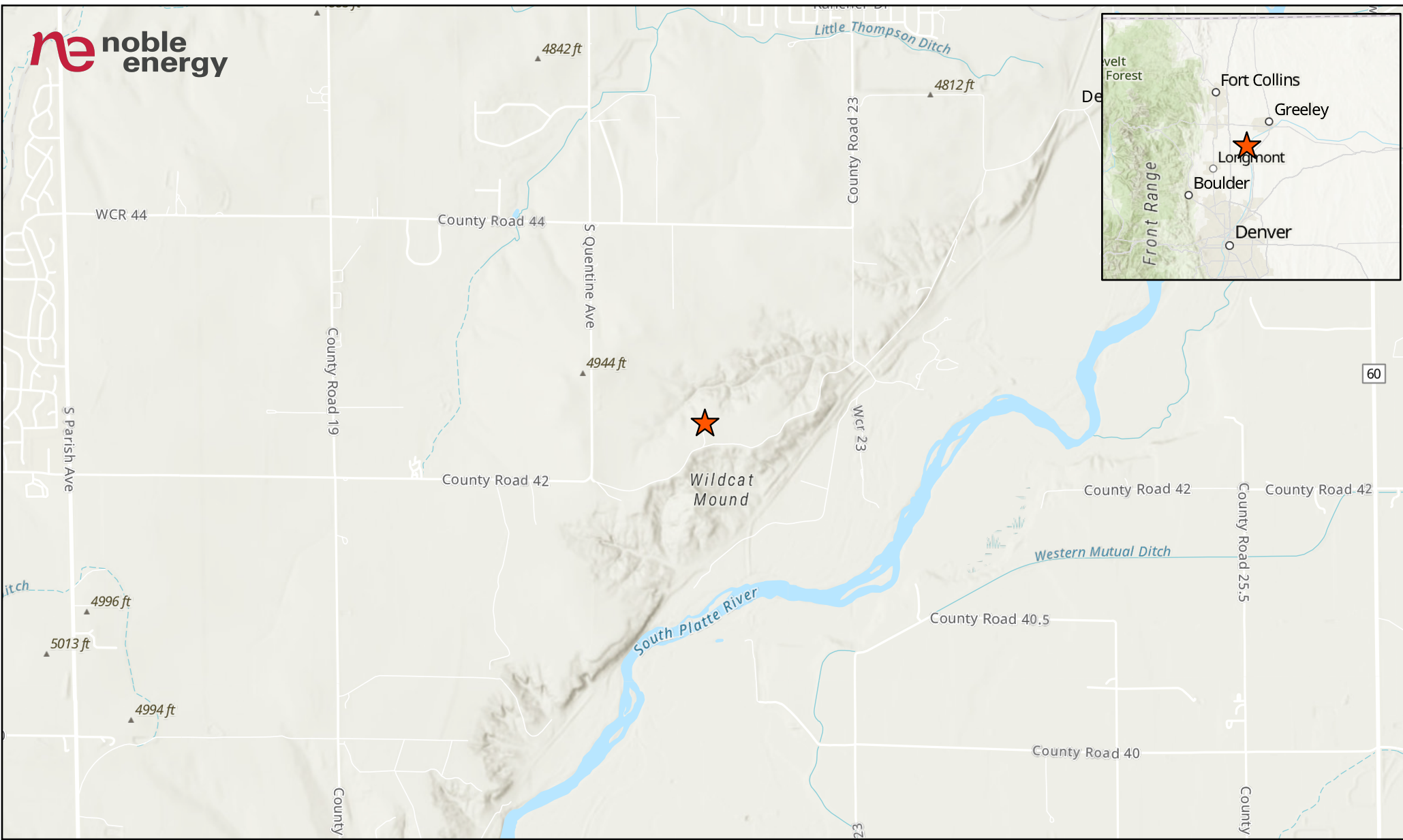
Table 5 – Soil Analytical Results Summary Table – Metals

Attachment A: Photographic Log

Attachment B: Facility Closure Checklists

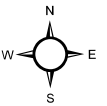
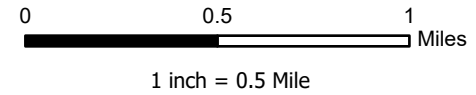
Attachment C: Field Form

FIGURES



LEGEND

Site Location



Project No: 024-358

Map By: JW

Date: 09/11/2024

**UPRC 23-1117 WELLHEAD
GENERAL LOCATION MAP**
NOBLE ENERGY
SE 1/4 SW 1/4 SECTION 23
T4N R67W, 6TH PM
WELD COUNTY, COLORADO



1843 Sunlight Dr.
Longmont, CO 80504
303.378.4036

Figure

1



Figure 2
Soil Sample Location Map
 UPRC 23-1117
 SESW-SEC 23-T4N-R67W
 Weld County, Colorado
 Noble Energy Inc.

- Site Location
- Soil Sample
- Background Sample
- Screening Point



Figure 3 Supplemental Site Investigation Map

UPRC 23-1117
SESW-SEC 23-T4N-R67W
Weld County, Colorado
Noble Energy Inc

- Soil Sample
- Background Sample
- Proposed Re-Sampling Location
- Screening Point

TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
UPRC 23-1117 WELLHEAD, WELD COUNTY, COLORADO
REM # 35496

Sample ID	Sample Date	Depth (ft)	GPS Data		VOC Concentration (ppm)
			Latitude	Longitude	
WH01@6	7/16/2024	6	40.293854	-104.859432	0.00
FLR01@4	7/16/2024	4	40.293854	-104.859401	0.00
WH01-W@4	7/16/2024	4	40.293852	-104.859461	0.00
WH01-S@4	7/16/2024	4	40.293834	-104.859431	0.00
WH01-N@4	7/16/2024	4	40.293873	-104.859432	0.00
BKG01@4'	4/16/2025	4	40.294278	-104.858827	NM
BKG01@6'	4/16/2025	6	40.294278	-104.858827	NM
BKG02@4'	4/16/2025	4	40.294435	-104.859525	NM
BKG02@6'	4/16/2025	6	40.294435	-104.859525	NM
BKG03@4'	4/16/2025	4	40.293466	-104.859862	NM
BKG03@6'	4/16/2025	6	40.293466	-104.859862	NM

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

NM = Not Measured

ft = Feet

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
UPRC 23-1117 WELLHEAD, WELD COUNTY, COLORADO
REM # 35496

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	7/16/2024	6	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<500	<0.200	<25	<100
FLR01@4	7/16/2024	4	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<500	<0.200	<25	<100

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
AP = Analysis pending
NA = Not analyzed

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
UPRC 23-1117 WELLHEAD, WELD COUNTY, COLORADO
REM # 35496

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	7/16/2024	6	<0.02	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002
FLR01@4	7/16/2024	4	<0.02	<0.02	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.002	<0.002

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

AP = Analysis pending

NA = Not analyzed

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
UPRC 23-1117 WELLHEAD, WELD COUNTY, COLORADO
REM # 35496

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	7/16/2024	6	8.43	0.539	0.771	0.416
FLR01@4	7/16/2024	4	8.46	0.514	0.739	0.363
BKG01@4'	4/16/2025	4	8.48	0.476	0.804	<2.00
BKG01@6'	4/16/2025	6	8.42	1.76	5.61	<2.00
BKG02@4'	4/16/2025	4	8.34	0.511	0.475	<2.00
BKG02@6'	4/16/2025	6	8.96	0.678	0.766	<2.00
BKG03@4'	4/16/2025	4	8.08	0.588	0.117	<2.00
BKG03@6'	4/16/2025	6	9.00	0.96	1.13	2.21
Maximum Background Concentration			9.00	1.760	5.610	2.210

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.

AP = Analysis pending

NA = Not analyzed

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
UPRC 23-1117 WELLHEAD, WELD COUNTY, COLORADO
REM # 35496

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	7/16/2024	6	4.62	206	0.178	<0.470*	12.5	10.9	13.9	<0.244	<0.0938	47.1
FLR01@4	7/16/2024	4	5.38	320	0.256	<0.402*	14.3	13.4	15.7	0.248	<0.0885	52.6
BKG01@4'	4/16/2025	4	1.63	195	<0.200	<0.30	12	9.2	5.22	<0.260	0.0540	18.0
BKG01@6'	4/16/2025	6	1.51	191	<0.200	<0.30	4.42	8.86	5.50	0.266	0.0496	17.3
BKG02@4'	4/16/2025	4	1.64	182	0.218	<0.30	4.26	9.31	5.28	<0.260	0.0597	16.3
BKG02@6'	4/16/2025	6	1.58	167	<0.200	<0.30	4.62	8.83	5.56	<0.260	0.0442	19.7
BKG03@4'	4/16/2025	4	1.9	174	0.209	<0.30	4.37	9.31	5.13	<0.260	0.0511	17.9
BKG03@6'	4/16/2025	6	1.75	183	0.204	<0.30	4.52	9.87	5.69	0.330	0.0637	18.4
1.25x Maximum Background Concentration			2.38	195	0.218	NA	12.0	9.87	5.69	0.330	0.0637	19.7

- Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
- Red** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
- Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).
- 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**

URPC 23-1117 Wellhead Photographic Log



URPC 23-1117 Wellhead Photographic Log



URPC 23-1117 Wellhead Photographic Log



URPC 23-1117 Wellhead Photographic Log





Photo Log

UPRC 23-1017

April 16, 2025

Initial BKG01 Photo



BKG01 Closure Photo



Initial BKG02 Photo



BKG02 Closure Photo



Initial BKG03 Photo



BKG03 Closure Photo



**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: UPRC 23-1117, 250509		Date: 7/16/2024				Remediation Project #: 35496			
Associated Wells: UPRC 23-1017		Age of Site: 6/14/1994-spud date				Number of Photos Attached: 4			
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.293863 / -104.859407						Estimated Facility Size (acres): ~0.01			
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Overall good									
USCS Soil Type: Silty Sand (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	05-123-18312								
Age	6/14/1994-spud date								
Condition of surface around wellhead	Good								
PID Readings	0.0 ppm								
Condition of subsurface (staining present)	Good								
PID Readings	0.0 ppm								
Sample taken? Location/Sample ID#	WH01@6, FLR01@4								
Photo Number(s)	1-4								
Other observations regarding wellheads:									
Summary									
Was impacted soil identified? <input checked="" type="checkbox"/> No Yes - less than 10 cubic yards Yes - more than 10 cubic yards									
Total number of samples field screened: 5				Total number of samples collected: 5					
Highest PID Reading: 0.0 ppm				Total number of samples submitted to lab for analysis: 2					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
Lateral extent:				Volume of soil removed:					
Is additional investigation required?									
Was groundwater encountered during the investigation? <input checked="" type="checkbox"/> No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:				Was remedial groundwater removal conducted? Yes No					
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater? Yes No				Volume of groundwater removed prior to sampling:					
Free product observed? Yes No				Volume of groundwater removed post sampling:					
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									

**ATTACHMENT C
FIELD FORM**

