



## **Facility Closure Investigation and Environmental Summary**

OCOMA C17-15 Wellhead

ECMC Remediation Project #34772

Weld County, Colorado

### **Attachments:**

**Figure 1 – General Location Map**

**Figure 2 – Wellhead Soil Sample and Field Screening Locations**

**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**

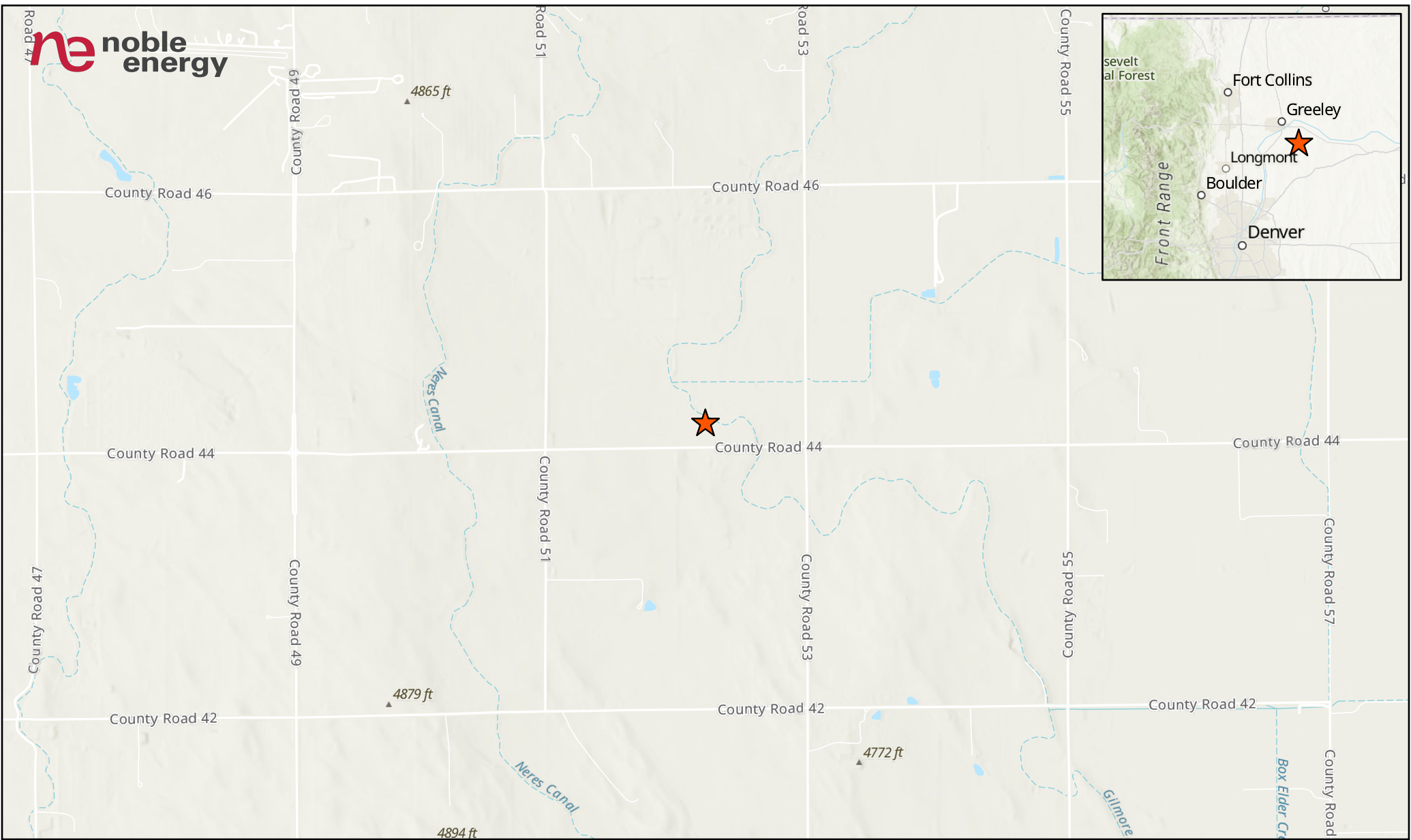
**Table 4 – Soil Analytical Results Summary Table – Soil Suitability**

**Table 5 – Soil Analytical Results Summary Table – Metals**

**Attachment A: Photographic Log**

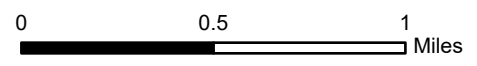
**Attachment B: Facility Closure Checklist**

## **FIGURES**

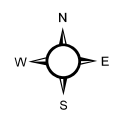


**LEGEND**

 Site Location



1 inch = 0.5 Mile



Project No:	024-225
Map By:	JW
Date:	06/28/2024

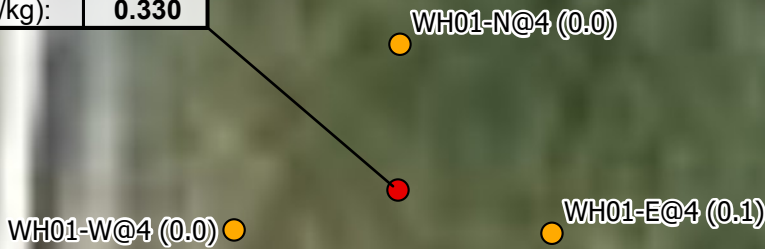
**OCOMA C17-15 WELLHEAD  
GENERAL LOCATION MAP**  
NOBLE ENERGY  
SW 1/4 SE 1/4 SECTION 17  
T4N R64W, 6TH PM  
WELD COUNTY, COLORADO



1843 Sunlight Dr.  
Longmont, CO 80504  
303.378.4036

Figure
1

WH01@6.5	
7/2/2025	
SAR:	<b>10.6</b>
Boron (mg/L):	<b>3.38</b>
Arsenic (mg/kg):	<b>4.63</b>
Selenium (mg/kg):	<b>0.330</b>



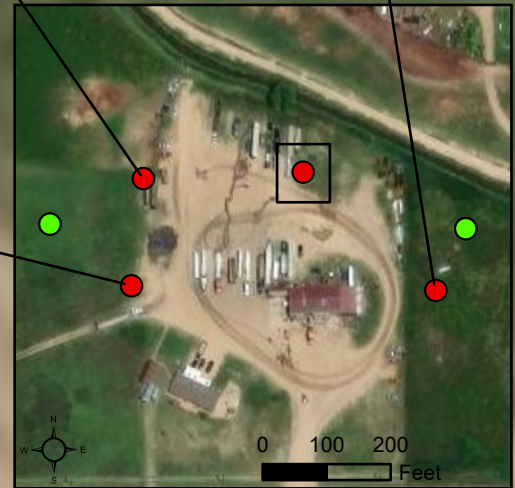
BKG01@4	
8/4/2025	
pH:	<b>8.43</b>
Arsenic (mg/kg):	<b>7.47</b>
Barium (mg/kg):	<b>91.5</b>
Selenium (mg/kg):	<b>0.399</b>

BKG02@4	
8/4/2025	
Boron (mg/L):	<b>2.65</b>
Arsenic (mg/kg):	<b>8.10</b>
Barium (mg/kg):	<b>116</b>
Lead (mg/kg):	<b>15.8</b>
Selenium (mg/kg):	<b>0.521</b>

BKG01@6	
8/4/2025	
Boron (mg/L):	<b>4.02</b>
Arsenic (mg/kg):	<b>10.5</b>
Barium (mg/kg):	<b>92.7</b>
Lead (mg/kg):	<b>15.2</b>
Selenium (mg/kg):	<b>0.658</b>

BKG02@6	
8/4/2025	
EC (mmhos/cm):	<b>6.29</b>
Boron (mg/L):	<b>2.97</b>
Arsenic (mg/kg):	<b>8.68</b>
Lead (mg/kg):	<b>14.7</b>
Selenium (mg/kg):	<b>0.665</b>

BKG03@4	
8/4/2025	
EC (mmhos/cm):	<b>5.59</b>
SAR:	<b>10.4</b>
Arsenic (mg/kg):	<b>8.71</b>
Nickel (mg/kg):	<b>42.5</b>
Selenium (mg/kg):	<b>0.414</b>

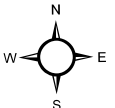
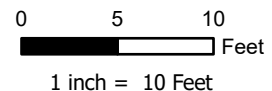


LABEL LEGEND	
XXXX@X: SAMPLE NAME @ DEPTH IN FEET	
WH: WELLHEAD SAMPLE	
FLR: FLOWLINE RISER SAMPLE	
BKG: BACKGROUND SAMPLE	
EC: ELECTRICAL CONDUCTIVITY	
SAR: SODIUM ADSORPTION RATIO	
<b>BOLD:</b> ABOVE ECMC TABLE 915-1 STANDARDS	
<b>BOLD:</b> ABOVE ECMC TABLE 915-1 GWSSL, REPRESENTATIVE OF BACKGROUND LEVELS	

**Legend**

- Soil Sample
- Screening Location
- Proposed Background Sample

NOTES:  
 - Sample Label (PID Result in ppm)  
 - ppm = parts per million  
 - PID = photoionization detector



Project No: 024-225
Map By: JW
Date: 11/23/2025

**OCOMA C17-15 WELLHEAD  
 SOIL SAMPLE AND FIELD SCREENING LOCATIONS**  
 NOBLE ENERGY  
 SW 1/4 SE 1/4 SECTION 17  
 T4N R64W, 6TH PM  
 WELD COUNTY, COLORADO



610 Garrison St., Unit T  
 Lakewood, CO 80215  
 303.378.4036

Figure  
 2

## **TABLES**

**TABLE 1**  
**FIELD DATA SUMMARY TABLE**  
**NOBLE 100322**  
**OCOMA C17-15 WELLHEAD, WELD COUNTY, COLORADO**  
**REM # 34772**

Sample ID	Sample Date	Depth (ft-bgs)	GPS Data Latitude/Longitude		VOC Concentration (ppm)
WH01@6	5/20/2024	6	40.306593	-104.572402	0.0
FLR01@4	5/20/2024	4	40.306560	-104.572405	0.0
WH01-W@4	5/20/2024	4	40.306588	-104.572433	0.0
WH01-E@4	5/20/2024	4	40.306587	-104.572374	0.1
WH01-N@4	5/20/2024	4	40.306614	-104.572402	0.0
WH01@6.5	7/2/2025	6.5	40.306593	-104.572402	0.6
BKG01	8/4/2025	4,6	40.306080	-104.571666	NM
BKG02	8/4/2025	4,6	40.306573	-104.573298	NM
BKG03	8/4/2025	4,6	40.306117	-104.573370	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).

ppm = Parts per million

ft-bgs = feet below ground surface

NM - Not measured

TABLE 2  
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA  
NOBLE 100322  
OCOMA C17-15 WELLHEAD, WELD COUNTY, COLORADO  
REM # 34772

Sample ID	Sample Date	Depth (ft-bgs)	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@6.5	7/2/2025	6.5	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.002	<125.200	<0.200	<25.0	<100

1. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit

2. \*\* Summation of GRO+DRO+ORO must be less than 500 mg/kg

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

ft-bgs - feet below ground surface

mg/kg - milligrams per kilogram

TABLE 3  
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA  
NOBLE 100322  
OCOMA C17-15 WELLHEAD, WELD COUNTY, COLORADO  
REM # 34772

Sample ID	Sample Date	Depth (ft-bgs)	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@6.5	7/2/2025	6.5	<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. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit  
ft-bgs - feet below ground surface  
mg/kg - milligrams per kilogram

**TABLE 4**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE 100322**  
**OCOMA C17-15 WELLHEAD, WELD COUNTY, COLORADO**  
**REM # 34772**

Sample ID	Sample Date	Depth (ft-bgs)	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@6.5	7/2/2025	6.5	8.23	3.41	<b>10.6</b>	<b>3.38</b>
BKG01@4	8/4/2025	4	<b>8.43</b>	0.628	4.85	0.712
BKG01@6	8/4/2025	6	8.10	2.99	3.49	<b>4.02</b>
BKG02@4	8/4/2025	4	8.16	2.02	5.34	<b>2.65</b>
BKG02@6	8/4/2025	6	7.81	<b>6.29</b>	4.78	<b>2.97</b>
BKG03@4	8/4/2025	4	7.92	<b>5.59</b>	<b>10.4</b>	1.15
BKG03@6	8/4/2025	6	7.82	<b>5.70</b>	<b>7.62</b>	1.31
Maximum Background Concentration			8.43	6.29	10.4	4.02

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)

3. Brown highlighted soil analytical values indicate a regulatory exceedance.

ft-bgs - feet below ground surface

EC - Electrical Conductivity

SAR - Sodium adsorption ratio

mmhos/cm - millimhos per centimeter

mg/L - milligrams per liter

TABLE 5  
SUMMARY OF METALS IN SOIL CHEMISTRY DATA  
NOBLE 100322  
OCOMA C17-15 WELLHEAD, WELD COUNTY, COLORADO  
REM # 34772

Sample ID	Sample Date	Depth (ft-bgs)	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@6.5	7/2/2025	6.5	<b>4.63</b>	78.7	<0.361	<0.342*	<43.7	<13.3	<24.7	<b>0.330</b>	<0.760	<352
BKG01@4	8/4/2025	4	<b>7.47</b>	<b>91.5</b>	<0.348	<0.30*	<42.1	<12.8	<23.8	<b>0.399</b>	<0.733	<339
BKG01@6	8/4/2025	6	<b>10.5</b>	<b>92.7</b>	<0.341	<0.29*	<41.3	<b>15.2</b>	<23.3	<b>0.658</b>	<0.717	<332
BKG02@4	8/4/2025	4	<b>8.10</b>	<b>116</b>	<0.353	<0.29*	<42.7	<b>15.8</b>	<24.2	<b>0.521</b>	<0.743	<344
BKG02@6	8/4/2025	6	<b>8.68</b>	<72.8	<0.337	<0.30*	<40.8	<b>14.7</b>	<23.1	<b>0.665</b>	<0.710	<328
BKG03@4	8/4/2025	4	<b>8.71</b>	<74.3	<0.344	<0.30*	<41.7	<12.7	<b>42.5</b>	<b>0.414</b>	<0.725	<335
BKG03@6	8/4/2025	6	<b>6.83</b>	<b>134</b>	<0.343	<0.29*	<41.5	13.9	<23.5	<b>0.405</b>	<0.722	<334
1.25 X Maximum Background Concentration			13.1	168	-	-	-	19.8	53.1	0.831	-	-

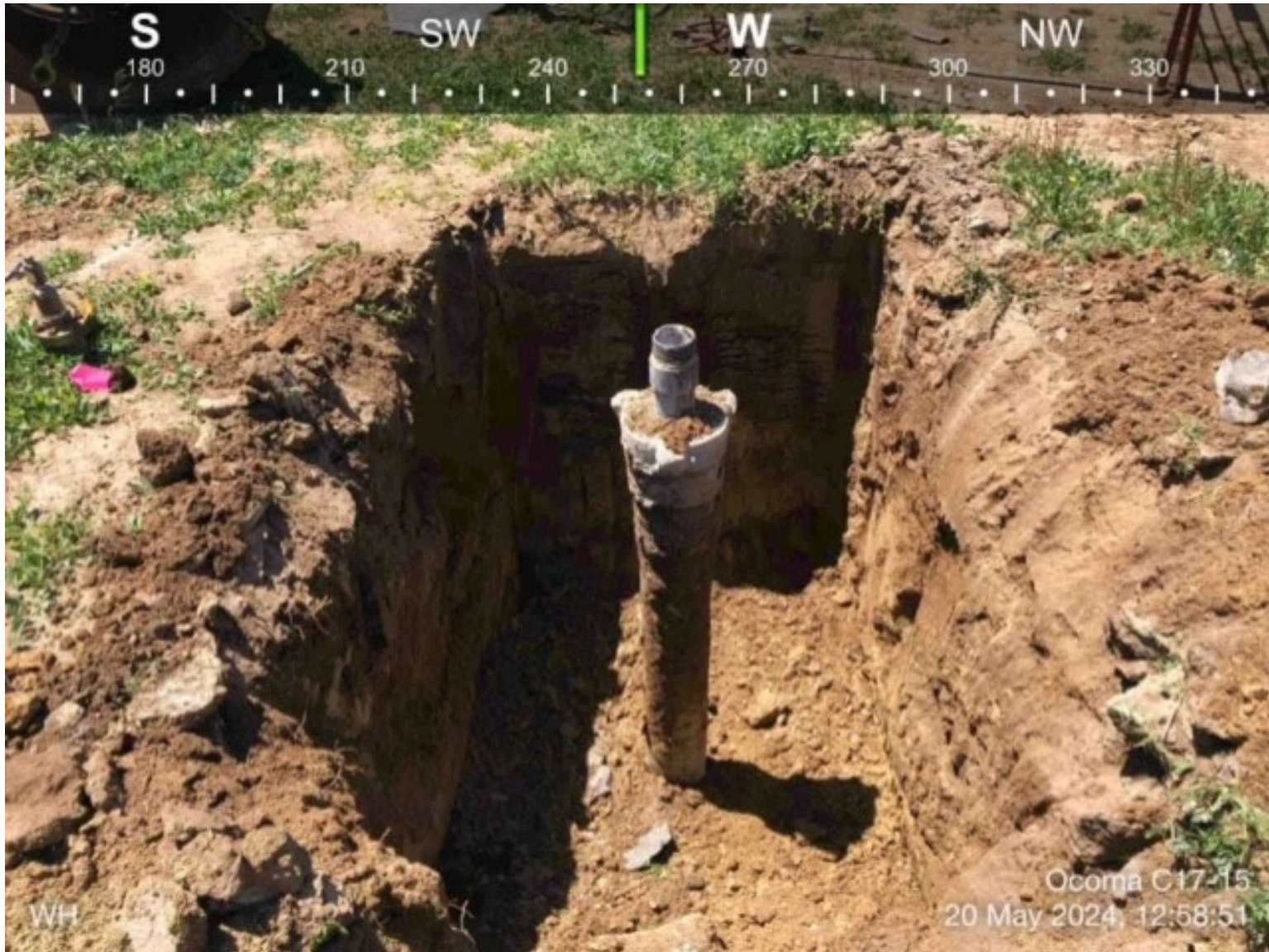
1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
  2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)
  3. Grey highlighted soil analytical values indicate result is less than laboratory reporting limit
- \* Indicates laboratory reporting or minimum detection limit in excess of SSL

ft-bgs - feet below ground surface

mg/kg - milligrams per kilogram

**ATTACHMENT A  
PHOTOGRAPHIC LOG**

Ocoma C17-15 Wellhead Photographic Log



Ocoma C17-15 Wellhead Photographic Log



Ocoma C17-15 Wellhead Photographic Log



Ocoma C17-15 Wellhead Photographic Log





# Photo Log

**OCOMA C17-15**

**August 4, 2025**

**Initial BKG01 Photo**



**BKG01 Closure Photo**



**Initial BKG02 Photo**



**BKG02 Closure Photo**



**Initial BKG03 Photo**



**BKG03 Closure Photo**



**ATTACHMENT B  
FACILITY CLOSURE CHECKLIST**

# 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: OCOMA C17-15, 245698		Date: 05/20/2024 and 07/02/2025						Remediation Project #: 34772	
Associated Wells: NA		Age of Site: 06/13/1987 - Spud Date						Number of Photos Attached: 10	
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) 40.306560 / -104.572390							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/Not 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	05-123-13493								
Age	06/13/1987 - Spud Date								
Condition of surface around wellhead	Good								
PID Readings	0.0 ppm - 0.1 ppm								
Condition of subsurface (staining present)	Good								
PID Readings	0.6 ppm								
Sample taken? Location/Sample ID#	WH01@6.5								
Photo Number(s)	1-10								
Other observations regarding wellheads:  NA									
Summary									
Was impacted soil identified? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards									
Total number of samples field screened: 5				Total number of samples collected: 5					
Highest PID Reading: 0.6 ppm				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="checkbox"/> No <input type="checkbox"/> Yes - not impacted or in contact with impacted soils <input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils									
Measured depth to groundwater:				Was remedial groundwater removal conducted? <input type="checkbox"/> Yes <input type="checkbox"/> No					
Date Groundwater was encountered:				Commencement date of removal:					
Sheen on groundwater? <input type="checkbox"/> Yes <input type="checkbox"/> No				Volume of groundwater removed prior to sampling:					
Free product observed? <input type="checkbox"/> Yes <input type="checkbox"/> 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:									