



Facility Closure Investigation and Environmental Summary

FOSS 06-35 Wellhead

ECMC Remediation Project #38413

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 Checklists

FIGURES



4844 ft

Allison Reservoirs

County Road 59

County Road 61

ad 63

4798 ft

County Road 74

County Road 74



County Road 72



392

County Road 70

Greeley Number 2 Ditch

County Road 59

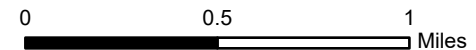
County Road 61

4707 ft

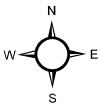
4700 ft

LEGEND

 Site Location



1 inch = 0.5 Mile



Project No: 025-041

Map By: JW

Date: 03/02/2025

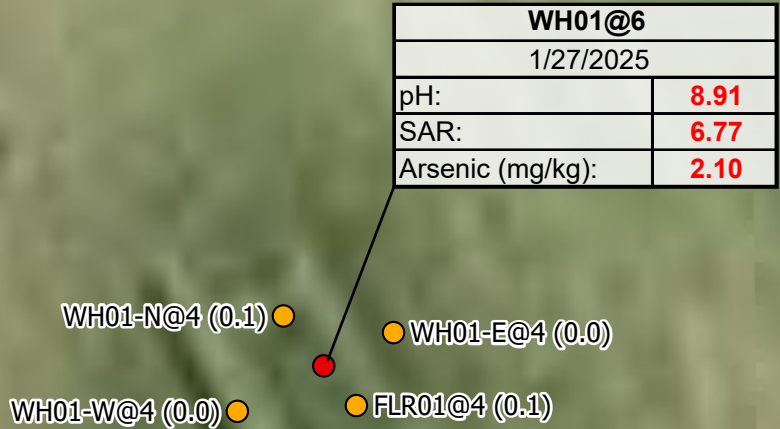
**FOSS 06-35 WELLHEAD
GENERAL LOCATION MAP**
NOBLE ENERGY
SE 1/4 SW 1/4 SECTION 6
T6N R63W, 6TH PM
WELD COUNTY, COLORADO



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

Figure

1



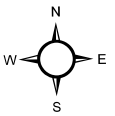
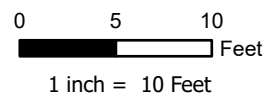
LABEL LEGEND
 XXXX@X: SAMPLE NAME @ DEPTH IN FEET
 WH: WELLHEAD SAMPLE
 FLR: FLOWLINE RISER SAMPLE
 SAR: SODIUM ADSORPTION RATIO
BOLD: ABOVE ECMC TABLE 915-1 GWSSL

Maxar, Microsoft

Legend

- Soil Sample
- Screening Location

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



Project No: 025-041
 Map By: JW
 Date: 03/02/2025

FOSS 06-35 WELLHEAD
SOIL SAMPLE AND FIELD SCREENING LOCATIONS
 NOBLE ENERGY
 SE 1/4 SW 1/4 SECTION 6
 T6N R63W, 6TH PM
 WELD COUNTY, COLORADO



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

Figure
 2

Cherwon, Figure 2 - Template Noble Wellhead - Soil Sample and Field Screening Locations

TABLES

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
FOSS 06-35 WELLHEAD, WELD COUNTY, COLORADO
REM # 38413

Sample ID	Sample Date	Depth (ft-bgs)	GPS Data		VOC Concentration (ppm)
			Latitude	Longitude	
WH01@6	1/29/2025	6	40.511335	-104.484181	0.0
FLR01@4	1/29/2025	4	40.511330	-104.484175	0.1
WH01-N@4	1/29/2025	4	40.511343	-104.484188	0.1
WH01-E@4	1/29/2025	4	40.511340	-104.484168	0.0
WH01-W@4	1/29/2025	4	40.511329	-104.484197	0.0

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

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE 100322
FOSS 06-35 WELLHEAD, WELD COUNTY, COLORADO
REM # 38413

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	1/29/2025	6	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00122	<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
FOSS 06-35 WELLHEAD, WELD COUNTY, COLORADO
REM # 38413

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	1/29/2025	6	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122	<0.00122

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
FOSS 06-35 WELLHEAD, WELD COUNTY, COLORADO
REM # 38413

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	1/29/2025	6	8.91	0.803	6.77	0.200

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s)

2. 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
FOSS 06-35 WELLHEAD, WELD COUNTY, COLORADO
REM # 38413

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	1/29/2025	6	2.10	41.4	<0.0959	<0.169*	<9.59	4.00	3.96	<0.249	<0.0959	<35.5

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s)
 2. Red 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**

Photographic Log



Photographic Log



WH Excavation Cut and Cap

Foss 06-35
29 Jan 2025 09:53:15

Photographic Log



Photographic Log



Photographic Log



**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: FOSS 06-35, 290569		Date: 01/29/2025			Remediation Project #: 38413			
Associated Wells: NA		Age of Site: 11/18/2010 - Spud Date			Number of Photos Attached: 5			
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) Lat/Long: 40.511337 / -104.484180							Estimated Facility Size (acres): ~.01	
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Overall good								
USCS Soil Type: SM				Estimated Depth to Groundwater: Unknown b/c GW 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	05-123-25138							
Age	11/18/2010 - Spud Date							
Condition of surface around wellhead	Good							
PID Readings	0.0ppm - 0.1ppm							
Condition of subsurface (staining present)	Good							
PID Readings	0.0ppm							
Sample taken? Location/Sample ID#	WH01@6							
Photo Number(s)	1-5							
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: 0.1ppm				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:								