

Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure <u> </u>		Tank Battery Closure <u> </u>		Flowline Closure <u> </u>		Partially Buried Vault Closure <u> </u>	
Site Name & COGCC Facility Number: Lehfeldt #C27-15		Date: 03/28/23					Remediation Project #: 26094		
Associated Wells: 05-123-13851		Age of Site: Years					Number of Photos Attached: 1		
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)						40.277960 / -104.534730			
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Good Condition									
USCS Soil Type: Silty SAND				Estimated Depth to Groundwater: Approx. 20-30'					
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.									
Wellhead(s)									
Well API	05-123-13851								
Age	Years								
Condition of surface around wellhead	Good - Per Crew								
PID Readings	N/A - Excavated Upon Arrival								
Condition of subsurface (staining present)	Good - No Odor/Staining								
PID Readings	0.2	0.1	0.0	0.5	3.5				
Sample taken? Location/Sample ID#	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	WH-FS-01				
Photo Number(s)	See photolog								
Other observations regarding wellheads: Well casing cut/capped following assessment.									
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: 3.5				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:					
N/A									
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				N/A					
Total number of samples collected:				Total Volume of groundwater removed:					
Total number of samples submitted to lab for analysis:									

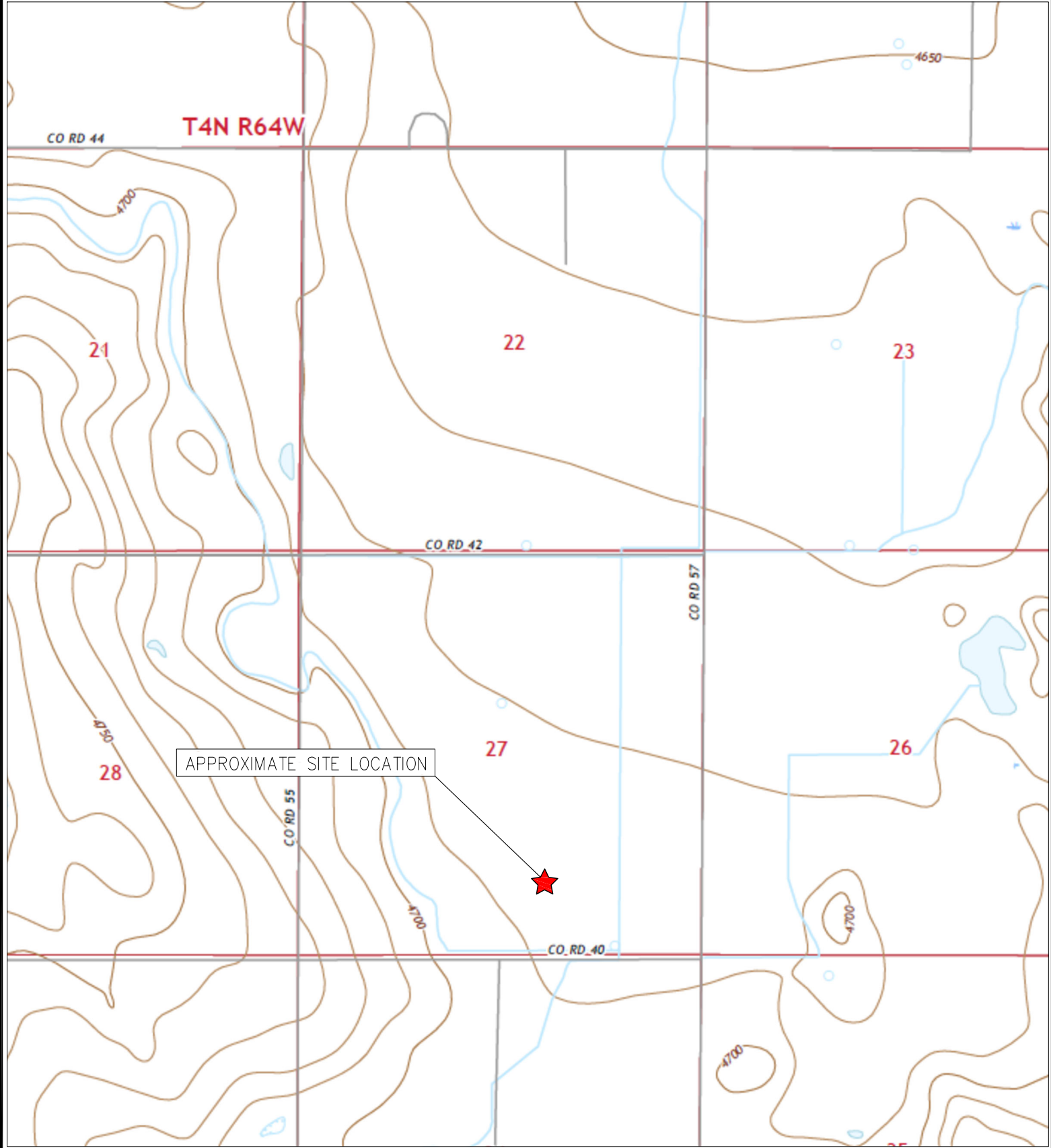


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map



APPROXIMATE SITE LOCATION



TOPOGRAPHIC SITE LOCATION MAP
 LEHFELDT #C27-15
 CLOSURE ASSESSMENT
 40.277960 / -104.534730
 SW¼ SE¼ SEC.27 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-13851
 REMEDIATION # 26094



EAGLE
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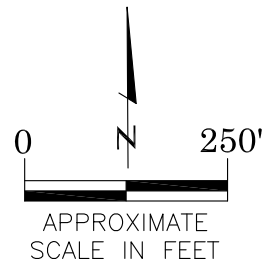
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,
 VALLEY VIEW SCHOOL, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

-  FORMER LEHFELDT #C27-15 WELLHEAD (PLUGGED AND ABANDONED)
-  ASSOCIATED SEPARATOR
-  APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP
LEHFELDT #C27-15
CLOSURE ASSESSMENT
40.277960 / -104.534730
SW¼ SE¼ SEC.27 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13851
REMEDATION # 26094

FIGURE NO.
2

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LEGEND

- WELLHEAD ASSESSMENT BOUNDARIES
- 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)
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)
Brn= 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

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

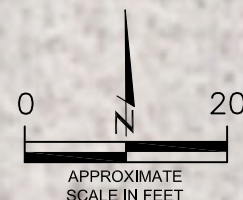
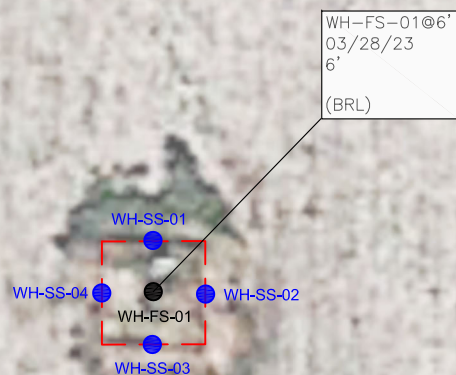
SOIL ANALYTICAL MAP
LEHFELDT #C27-15
CLOSURE ASSESSMENT
40.277960 / -104.534730
SW¼ SE¼ SEC.27 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13851
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FIGURE NO.
3

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TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
LEHFELDT #C27-15
CLOSURE ASSESSMENT
40.277960 / -104.534730
SW¼ SE¼ SEC.27 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13851
REMEDIAION # 26094

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.278045 / -104.534614)	03/28/23	5	0.2	N
WH-SS-02 @ 5' (40.278031 / -104.534596)	03/28/23	5	0.1	N
WH-SS-03 @ 5' (40.278017 / -104.534615)	03/28/23	5	0.0	N
WH-SS-04 @ 5' (40.278031 / -104.534633)	03/28/23	5	0.5	N
WH-FS-01 @ 6' (40.278030 / -104.534616)	03/28/23	6	3.5	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				



TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
LEHFELDT #C27-15
CLOSURE ASSESSMENT
40.277960 / -104.534730
SW¼ SE¼ SEC.27 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13851
REMEDIAION # 26094

Sample Location		WH-FS-01 @ 6'		
(Latitude / Longitude)		(40.278030 / -104.534616)		
Sample Date		3/28/2023		
Sample Depth		6'		
PID Reading (ppm-v)		3.5		
Regulatory Limits				
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	
VOCs				
Benzene	mg/kg	1.2	0.0026	<0.00200
Toluene	mg/kg	490	0.69	<0.00200
Ethylbenzene	mg/kg	5.8	0.78	<0.00200
Total Xylenes	mg/kg	58	9.9	<0.00200
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	<0.00200
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	0.00416
TOTAL PETROLEUM HYDROCARBONS				
TPH-GRO	mg/kg	500	--	<0.200
TPH-DRO	mg/kg	500	--	49.8
TPH-RRO	mg/kg	500	--	101
POLYCYCLIC AROMATIC HYDROCARBONS				
1-Methyl-naphthalene	mg/kg	18	0.006	0.00215
2-Methyl-naphthalene	mg/kg	24	0.019	0.00218
Acenaphthene	mg/kg	360	0.55	0.000614
Anthracene	mg/kg	1800	5.8	<0.00067
Benzo(a)-anthracene	mg/kg	1.1	0.011	<0.00067
Benzo(a)-pyrene	mg/kg	0.11	0.24	<0.00067
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	<0.00067
Benzo(k)-fluoranthene	mg/kg	11	2.9	<0.00067
Chrysene	mg/kg	110	9	0.000661
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	<0.00067
Fluoranthene	mg/kg	240	8.9	0.000647
Fluorene	mg/kg	240	0.54	0.000673
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	<0.00067
Naphthalene	mg/kg	2	0.0038	<0.00201
Pyrene	mg/kg	180	1.3	0.000861
SOIL SUITABILITY (Inorganics)				
Boron	mg/L	2	--	0.399
pH	standard unit	6-8.3	--	8.28
Sodium Adsorption Ratio (SAR)	--	<6	--	1.81
Specific Conductance (EC)	mmhos/cm	<4	--	0.762
ECMC - Energy & Carbon Management Commission		VOCs - Volatile Organic Compounds		
mg/kg = milligrams per kilogram		RSSLs = Residential Soil Screening Levels		
mmhos/cm = millimhos per centimeter		GSSLs = Protection of Groundwater Soil Screening Levels		
PID = Photoionization Detector		TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics		
ppm-v = parts per million by volume		TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics		
mg/L = milligrams per liter		TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics		
SAR = Sodium Adsorption Ratio				
Notes:				
Values presented with a less than symbol (<) did not contain concentrations at or above the laboratory reporting limit and/or minimum detection limit.				
Values presented in BOLD exceed ECMC Table 915-1 Regulatory Limits.				



ATTACHMENT A

Photo Log

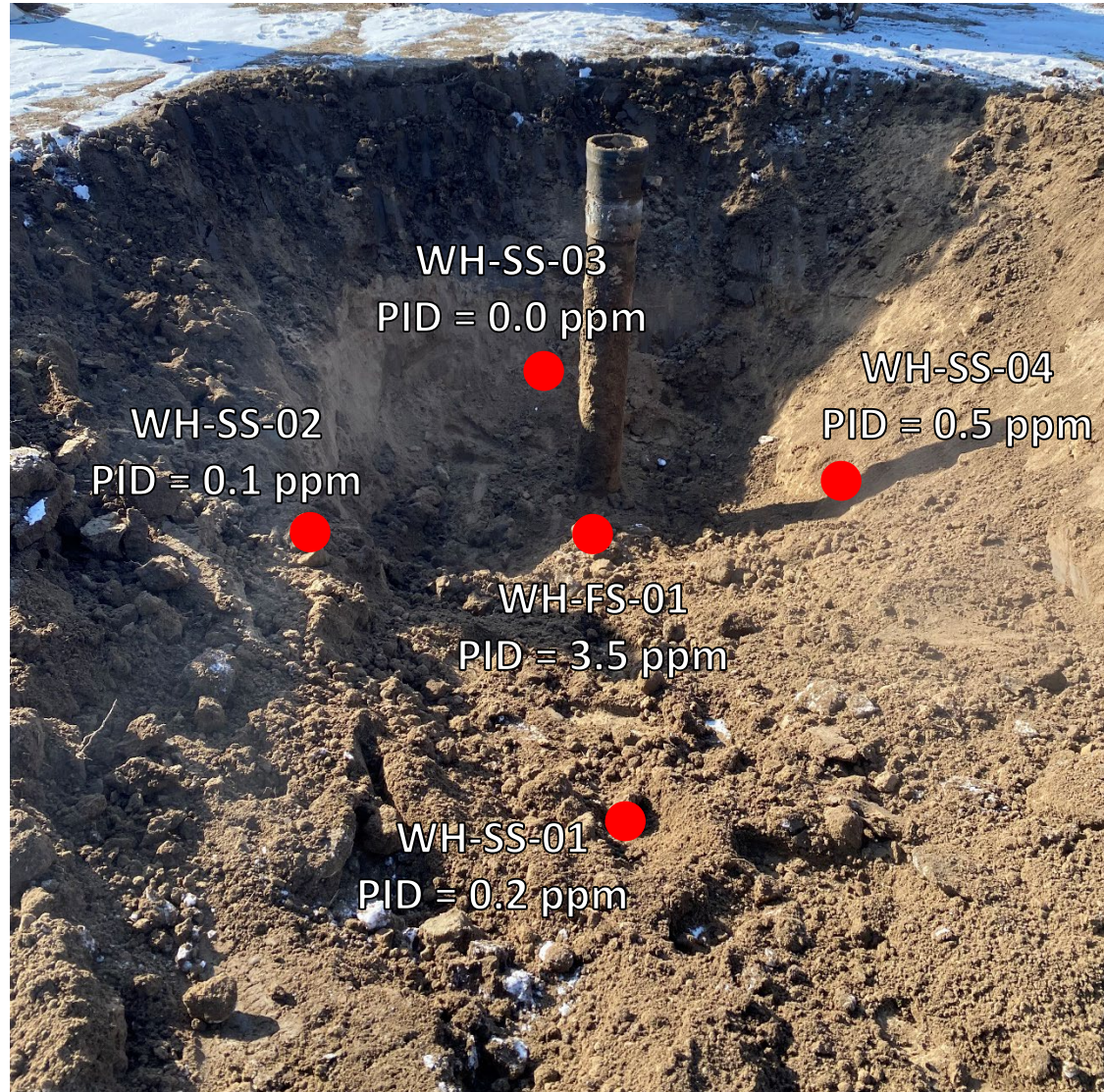
Lehfeltdt #C27-15
API # 05-123-13851
Remediation # 26094

Closure Assessment

March 2023



Wellhead Excavation – 03/28/23



Looking south

No petroleum hydrocarbon staining or odor observed