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:	Date:	Remediation Project #:
Trebor #B11-15	10/09/23	30734
Associated Wells:	**Age of Site:**	**Number of Photos Attached:**
05-123-13522	years	6
Location: *(GPS coordinates of wellhead or southeastern most wellhead for multiple)* 40.408712 / -104.515210		**Estimated Facility Size (acres):** —

General Condition of Site: *(General observations regarding housekeeping, corrosion, waste management, etc.)*

Good condition

USCS Soil Type: Clayey Sand	Estimated Depth to Groundwater: >20'

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	05-123-13522					
Age	years					
Condition of surface around wellhead	Good - No odor/no staining					
PID Readings	WH-N: 0.1	WH-E: 0.3	WH-S: 0.4	WH-W: 0.1		
Condition of subsurface (staining present	Good - No odor/no staining					
PID Readings	2.5	1.9	1.7	1.4	1.3	
Sample taken? Location/Sample ID#	WH-SS-01	WH-SS-02	WH-SS-03	WH-SS-04	WH-FS-01	
Photo Number(s)	See photo log					

Other observations regarding wellheads:

Summary

Was impacted soil identified?

(No) Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: 9	Total number of samples collected: 9
Highest PID Reading: 2.5	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:
Lateral extent:	Volume of soil removed:

N/A

Is additional investigation required?

Was groundwater encountered during the investigation?

(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:	

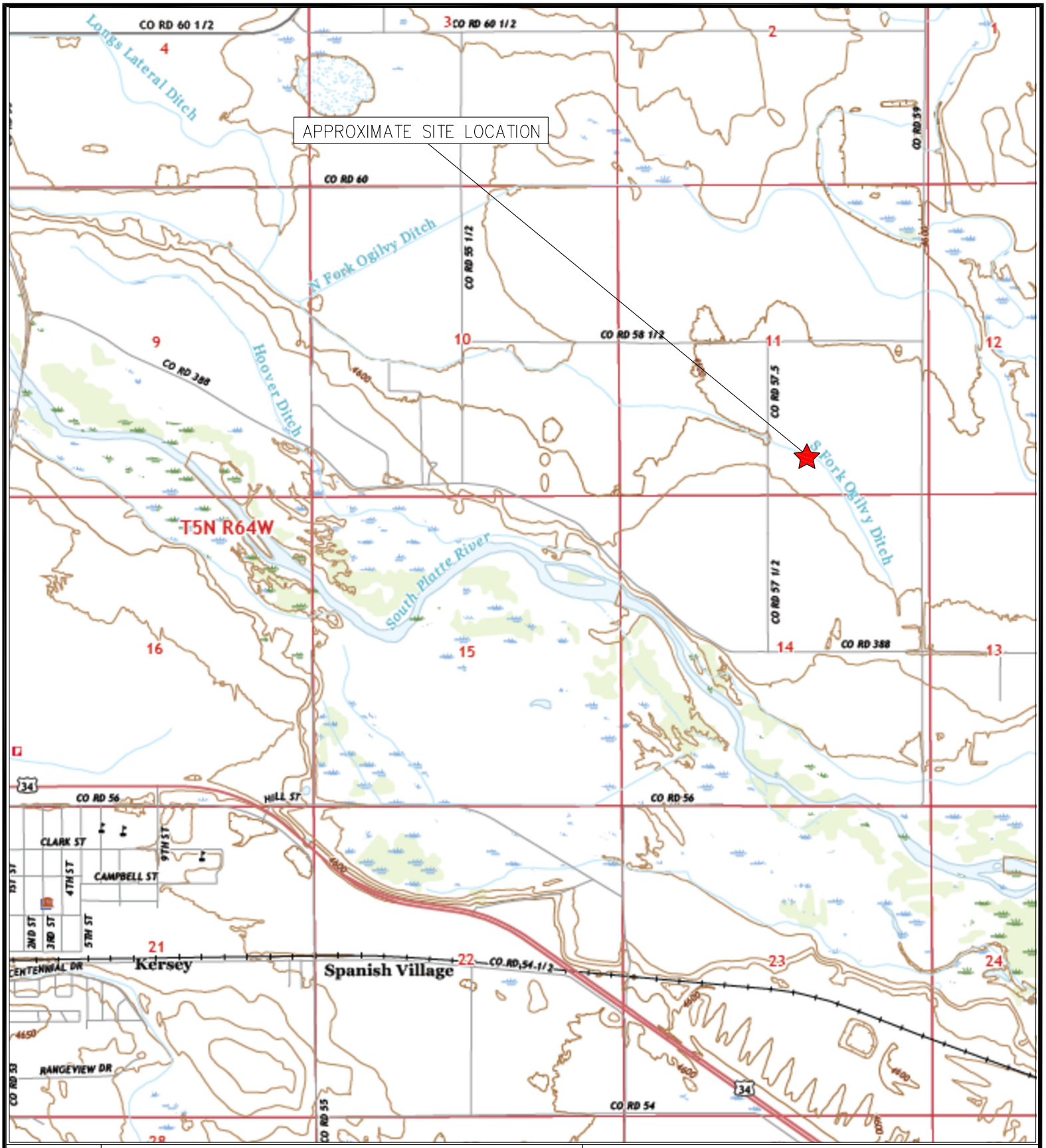
FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map

Figure 4: Metals in Soil Map



TOPOGRAPHIC SITE LOCATION MAP
TREBOR #B11-15
CLOSURE ASSESSMENT
40.408712 / -104.515210
SW¼ SE¼ SEC.11 T5N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13522
REMEDIATION # 30734

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, KERSEY, CO QUADRANGLE 2022

FIGURE NO. 1

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LEGEND

- FORMER TREBOR #B11-15 WELLHEAD (PLUGGED AND ABANDONED)
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION

0 N 200'

APPROXIMATE SCALE IN FEET

AERIAL SITE LOCATION MAP
TREBOR #B11-15
CLOSURE ASSESSMENT
40.408712 / -104.515210
SW¼ SE¼ SEC.11 T5N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13522
REMEDIATION # 30734

FIGURE NO.
2

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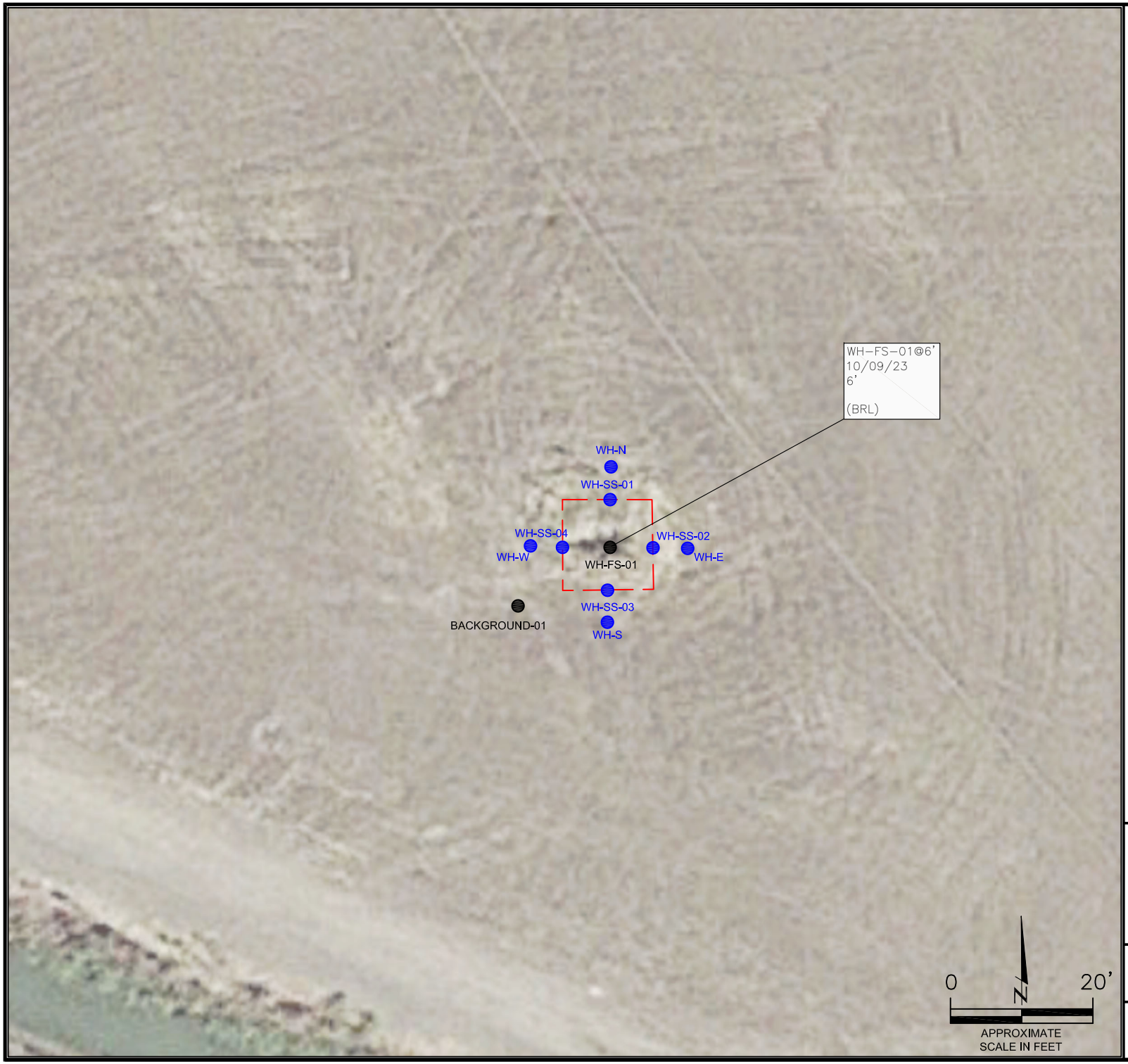

LEGEND

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)
N = NAPHTHALENE (mg/kg)
G = TPH–GRO (mg/kg)
D = TPH–DRO (mg/kg)
R = TPH–RRO (mg/kg)
1,2,4–TMB = 1,2,4 TRIMETHLYBENZENE (mg/kg)
1,3,5–TMB = 1,3,5 TRIMETHLYBENZENE (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
TREBOR #B11–15
CLOSURE ASSESSMENT
40.408712 / –104.515210
SW¼ SE¼ SEC.11 T5N R64W 6PM
WELD COUNTY, COLORADO
API # 05–123–13522
REMEDIATION # 30734

FIGURE NO. 3

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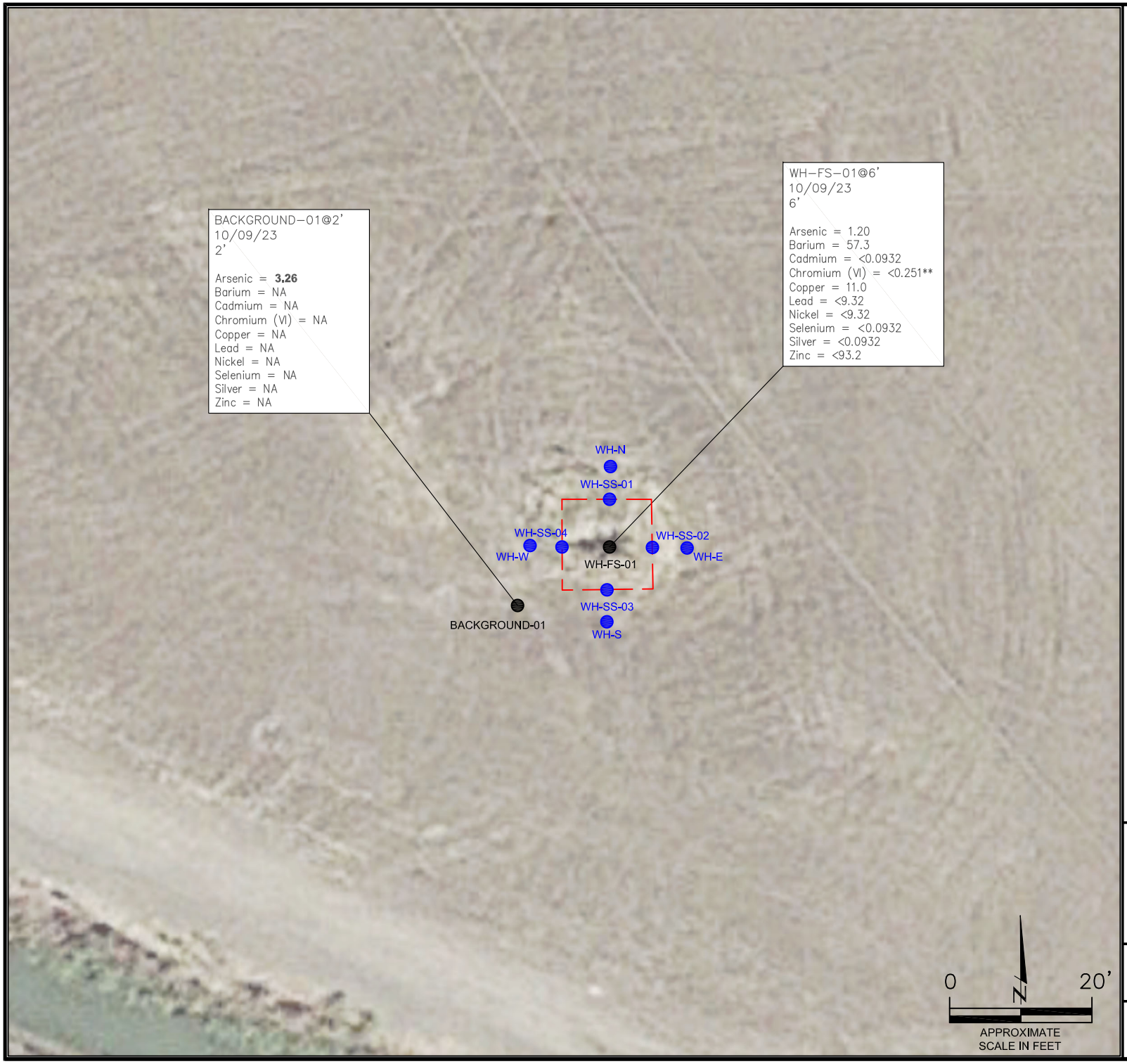

LEGEND

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 SAMPLE COLLECTED
APPROXIMATE DEPTH
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)

mg/kg = MILLIGRAMS PER KILOGRAM

NA – NOT ANALYZED

NOTES:
VALUES PRESENTED WITH A LESS THAN SYMBOL (<) DID NOT CONTAIN CONCENTRATIONS AT/OR ABOVE LABORATORY REPORTING LIMITS AND/OR MINIMUM DETECTION LIMITS.

VALUES PRESENTED IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS.

*VALUES EXCEED ECMC TABLE 915-1 PROTECTION OF GROUNDWATER SOIL SCREENING LEVELS, ONLY.

**ACHIEVABLE PRACTICAL QUANTITATIVE LIMITS FOR HEXAVALENT CHROMIUM (Cr VI) IN SOILS IS IN THE RANGE OF 0.1 TO 1 mg/kg.

ELEVATED METALS ARE NATURALLY OCCURRING IN COLORADO. LOCAL CLEAN-UP LEVELS ARE 1.25*BACKGROUND WHERE APPLICABLE.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

METALS IN SOIL MAP
TREBOR #B11-15
CLOSURE ASSESSMENT
40.408712 / -104.515210
SW¼ SE¼ SEC.11 T5N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13522
REMEDIATION # 30734

FIGURE NO. 4

DRAWN BY: BB

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TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
TREBOR #B11-15
CLOSURE ASSESSMENT
40.408712 / -104.515210
SW¼ SE¼ SEC.11 T5N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13522
REMEDIATION # 30734

Sample Location (Latitude/Longitude)	**Date**	**Approximate Depth** (feet)	**PID Reading** (ppm-v)	**Lab Submission** (Y/N)
WH-FS-01 @ 6' (40.408717 / -104.515199)	10/09/23	6	1.3	Y
WH-SS-01 @ 5' (40.408736 / -104.515201)	10/09/23	5	2.5	N
WH-SS-02 @ 5' (40.408179 / -104.515180)	10/09/23	5	1.9	N
WH-SS-03 @ 5' (40.408707 / -104.515199)	10/09/23	5	1.7	N
WH-SS-04 @ 5' (40.408179 / -104.515223)	10/09/23	5	1.4	N
WH-N @ 0.5' (40.408746 / -104.515199)	10/09/23	0.5	0.1	N
WH-E @ 0.5' (40.408718 / -104.515163)	10/09/23	0.5	0.3	N
WH-S @ 0.5' (40.408690 / -104.515201)	10/09/23	0.5	0.4	N
WH-W @ 0.5' (40.408720 / -104.515246)	10/09/23	0.5	0.1	N
Background-01 @ 2' (40.408692 / -104.515246)	10/09/23	2	0.2	Y

(Y/N) = Yes or No
ppm-v = parts per million by volume
PID = Photoionization Detector

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TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
TREBOR #B11-15
CLOSURE ASSESSMENT
40.408712 / -104.515210
SW¼ SE¼ SEC.11 T5N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-13522
REMEDIATION # 30734

Sample Location					WH-FS-01 @ 6'	Background-01 @ 2'
(Latitude / Longitude)					(40.408717 / -104.515199)	(40.408692 / -104.515246)
Sample Date					10/9/2023	10/9/2023
Sample Depth					6	2
PID Reading (ppm-v)					1.3	0.2
Regulatory Limits						
Chemical of Concern	**Units**	**ECMC Table 915-1 RSSLs**	**ECMC Table 915-1 GSSLs**	**Local Clean-Up Level**		
VOCs						
Benzene	mg/kg	1.2	0.0026	--	<0.00200	NA
Toluene	mg/kg	490	0.69	--	<0.00200	NA
Ethylbenzene	mg/kg	5.8	0.78	--	<0.00200	NA
Total Xylenes	mg/kg	58	9.9	--	<0.00200	NA
Naphthalene	mg/kg	2	0.0038	--	<0.00380	NA
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	--	<0.00200	NA
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	--	<0.00200	NA
TOTAL PETROLEUM HYDROCARBONS						
TPH-GRO	mg/kg	500	--	--	<0.200	NA
TPH-DRO	mg/kg	500	--	--	<25.0	NA
TPH-RRO	mg/kg	500	--	--	<100	NA
POLYCYCLIC AROMATIC HYDROCARBONS						
1-Methyl-naphthalene	mg/kg	18	0.006	--	<0.002	NA
2-Methyl-naphthalene	mg/kg	24	0.019	--	<0.002	NA
Acenaphthene	mg/kg	360	0.55	--	<0.020	NA
Anthracene	mg/kg	1800	5.8	--	<0.020	NA
Benzo(a)-anthracene	mg/kg	1.1	0.011	--	<0.005	NA
Benzo(a)-pyrene	mg/kg	0.11	0.24	--	<0.020	NA
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	--	<0.020	NA
Benzo(k)-fluoranthene	mg/kg	11	2.9	--	<0.020	NA
Chrysene	mg/kg	110	9	--	<0.020	NA
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	--	<0.020	NA
Fluoranthene	mg/kg	240	8.9	--	<0.020	NA
Fluorene	mg/kg	240	0.54	--	<0.020	NA
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	--	<0.020	NA
Pyrene	mg/kg	180	1.3	--	<0.020	NA
SOIL SUITABILITY (Inorganics)						
Boron	mg/L	2	--	--	0.103	NA
pH	standard unit	6-8.3	--	--	8.28	NA
Sodium Adsorption Ratio (SAR)	--	<6	--	--	1.53	NA
Specific Conductance (EC)	mmhos/cm	<4	--	--	0.364	NA
METALS						
Arsenic	mg/kg	0.68	0.29	4.07	1.2	3.26
Barium	mg/kg	15000	82	--	57.3	NA
Cadmium	mg/kg	71	0.38	--	<0.0932	NA
Copper	mg/kg	3100	46	--	<9.32	NA
Lead	mg/kg	400	14	--	11.0	NA
Nickel	mg/kg	1500	26	--	<9.32	NA
Selenium	mg/kg	390	0.26	--	<0.0932	NA
Silver	mg/kg	390	0.8	--	<0.0932	NA
Zinc	mg/kg	23000	370	--	<93.2	NA
Hexavalent Chromium	mg/kg	0.3**	0.00067**	0.1 to 1.0**	<0.251**	NA

ECMC = Energy & Carbon Management Commission
mg/kg = milligrams per kilogram
mmhos/cm = millimhos per centimeter
PID = Photoionization Detector
ppm-v = parts per million by volume
mg/L = milligrams per liter
SAR = Sodium Adsoption Ratio

NA - Not Analyzed
RSSLs = Residential Soil Screening Levels
GSSLs = Protection of Groundwater Soil Screening Levels
TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics
TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics
TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics

VOCs - Volatile Organic Compounds

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. Values presented with asterisk (*) exceed ECMC Table 915-1 GSSLs, only.

**Achievable practical quantitative limits for Hexavalent Chromium in soils is in the range of 0.1 to 1 mg/kg.

Elevated metals are naturally occurring in Colorado. Local clean-up is 1.25*Background where applicable.

EAGLE ENVIRONMENTAL CONSULTING, LLC

ATTACHMENT A

Photo Log

Trebor #B11-15

API # 05-123-13522

Remediation # 30734

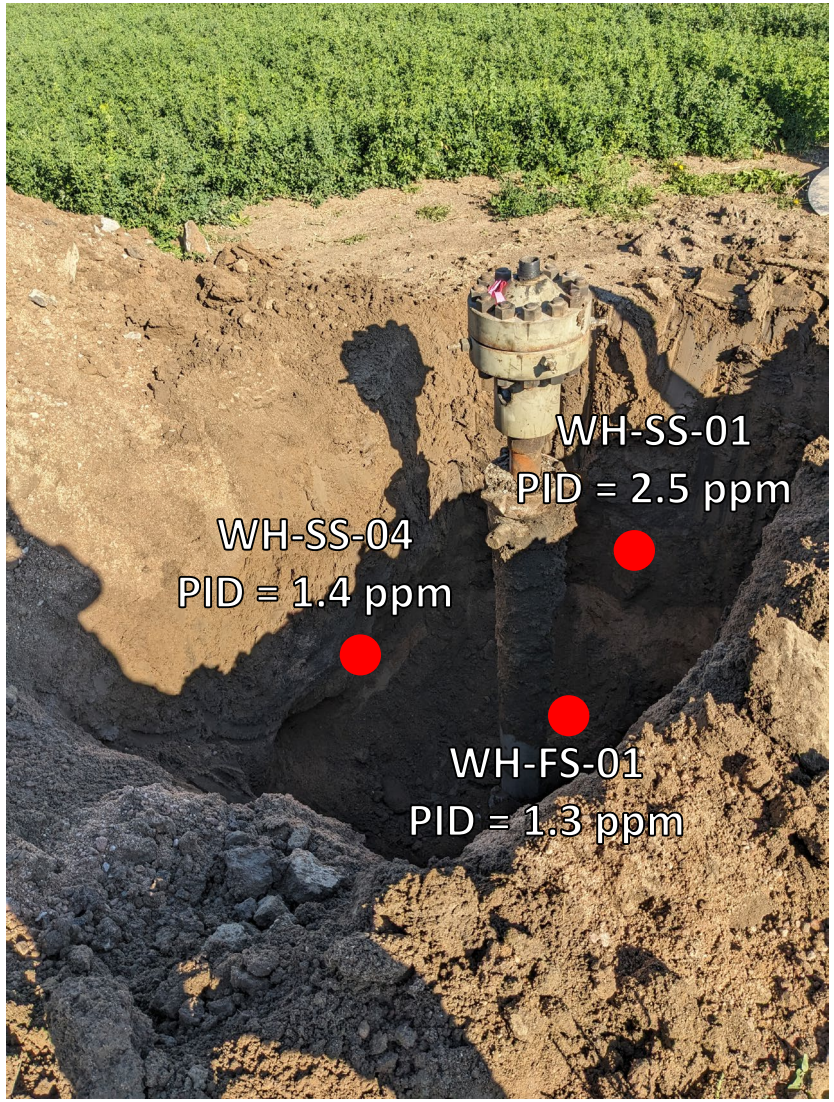
Closure Assessment

October 2023

EAGLE ENVIRONMENTAL CONSULTING, LLC

noble energy

Wellhead Excavation – 10/09/23



Looking northwest

No petroleum hydrocarbon staining or odor observed

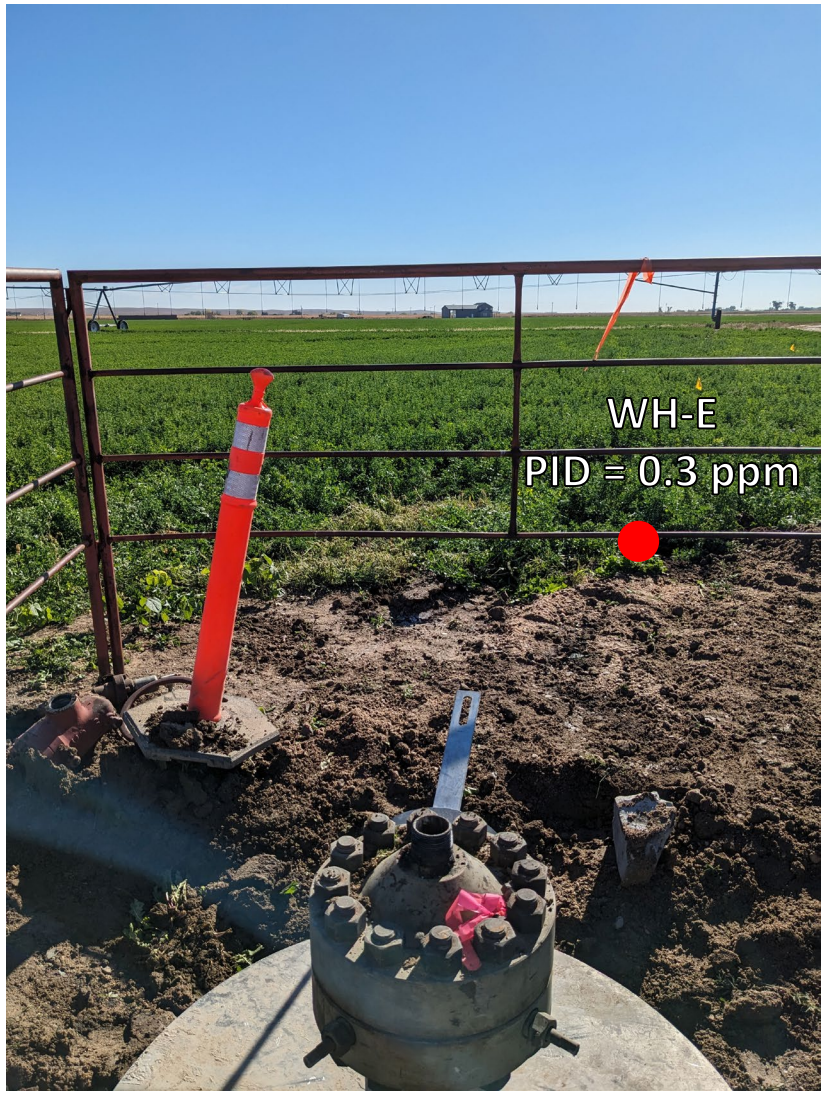
Looking southeast

No petroleum hydrocarbon staining or odor observed

Wellhead Surface – 10/09/23

Looking north

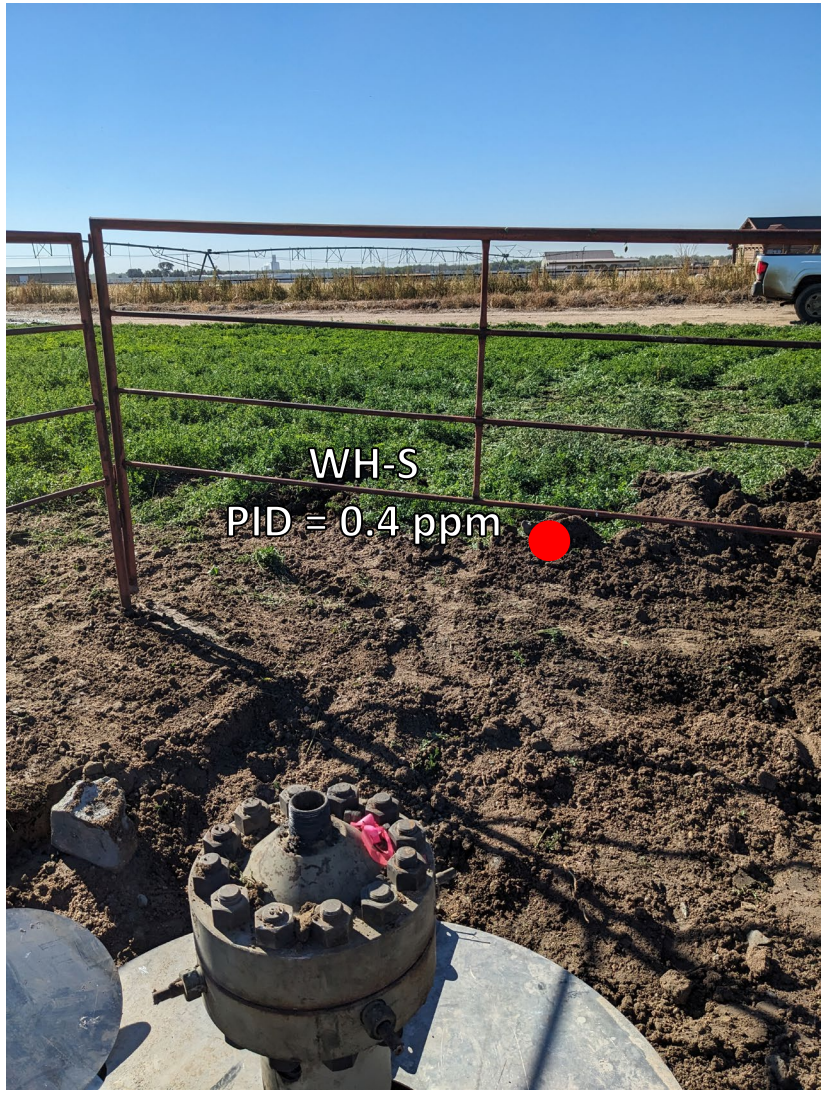
Site in good condition – no petroleum hydrocarbon staining or odor
Observed on surface around wellhead



Looking east

Site in good condition – no petroleum hydrocarbon staining or odor
Observed on surface around wellhead

Wellhead Surface – 10/09/23



Looking east

Site in good condition – no petroleum hydrocarbon staining or odor Observed on surface around wellhead

Looking north

Site in good condition – no petroleum hydrocarbon staining or odor Observed on surface around wellhead