

Wellhead Closure Checklist

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

Additional attachments (optional):		Pit Closure <input type="checkbox"/>		Tank Battery Closure <input type="checkbox"/>		Flowline Closure <input type="checkbox"/>		Partially Buried Vault Closure <input type="checkbox"/>	
Site Name & COGCC Facility Number: Volkens #2		Date: 05/23/23					Remediation Project #: 25964		
Associated Wells: 05-123-12105		Age of Site: Years					Number of Photos Attached: 1		
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)						40.303360 / -104.520270			
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Good Condition									
USCS Soil Type: Sandy CLAY				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	05-123-12105								
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	5.2	2.9	1.4	4.5	7.5				
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: 7.5				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					
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:									

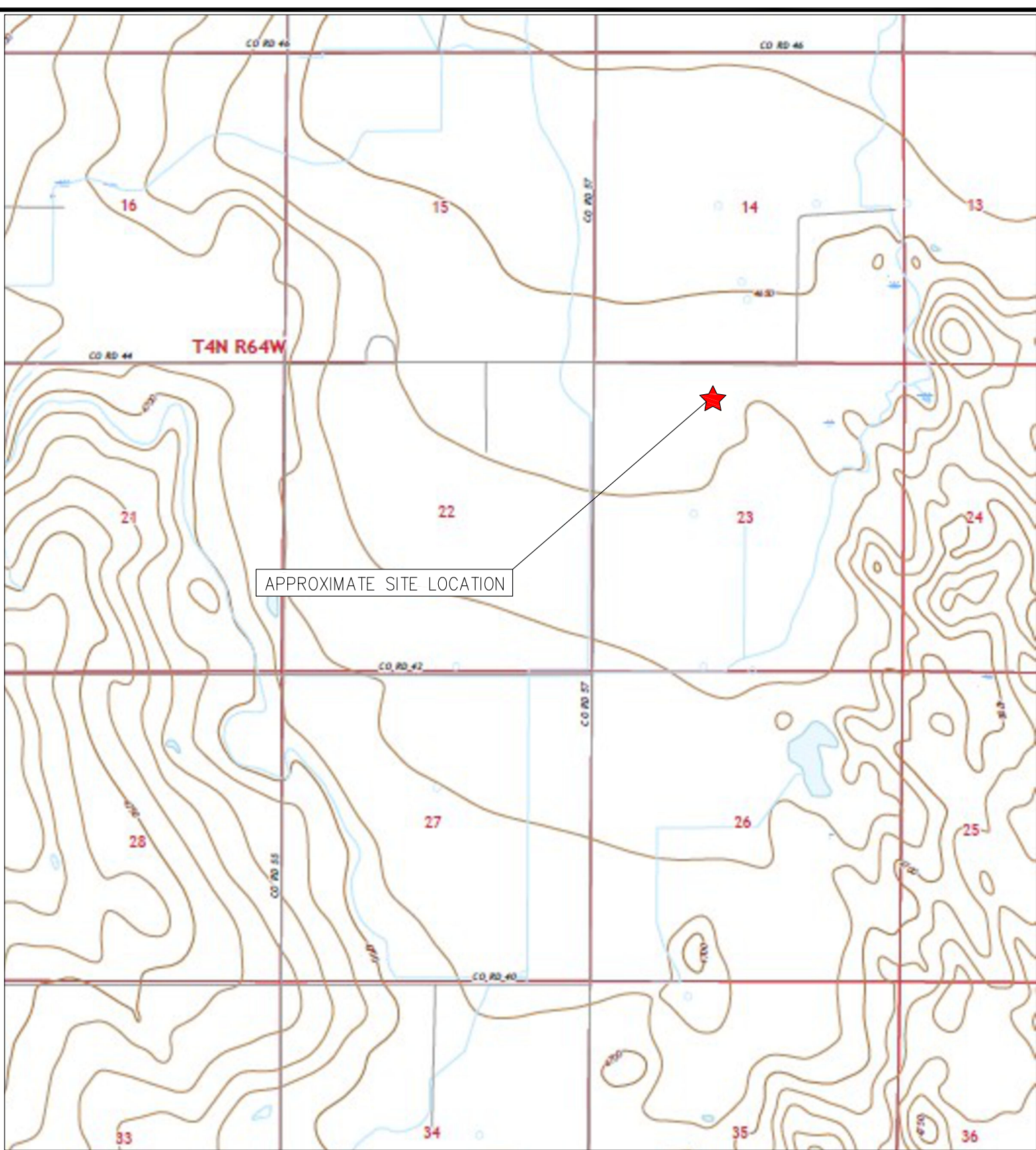


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map



APPROXIMATE SITE LOCATION

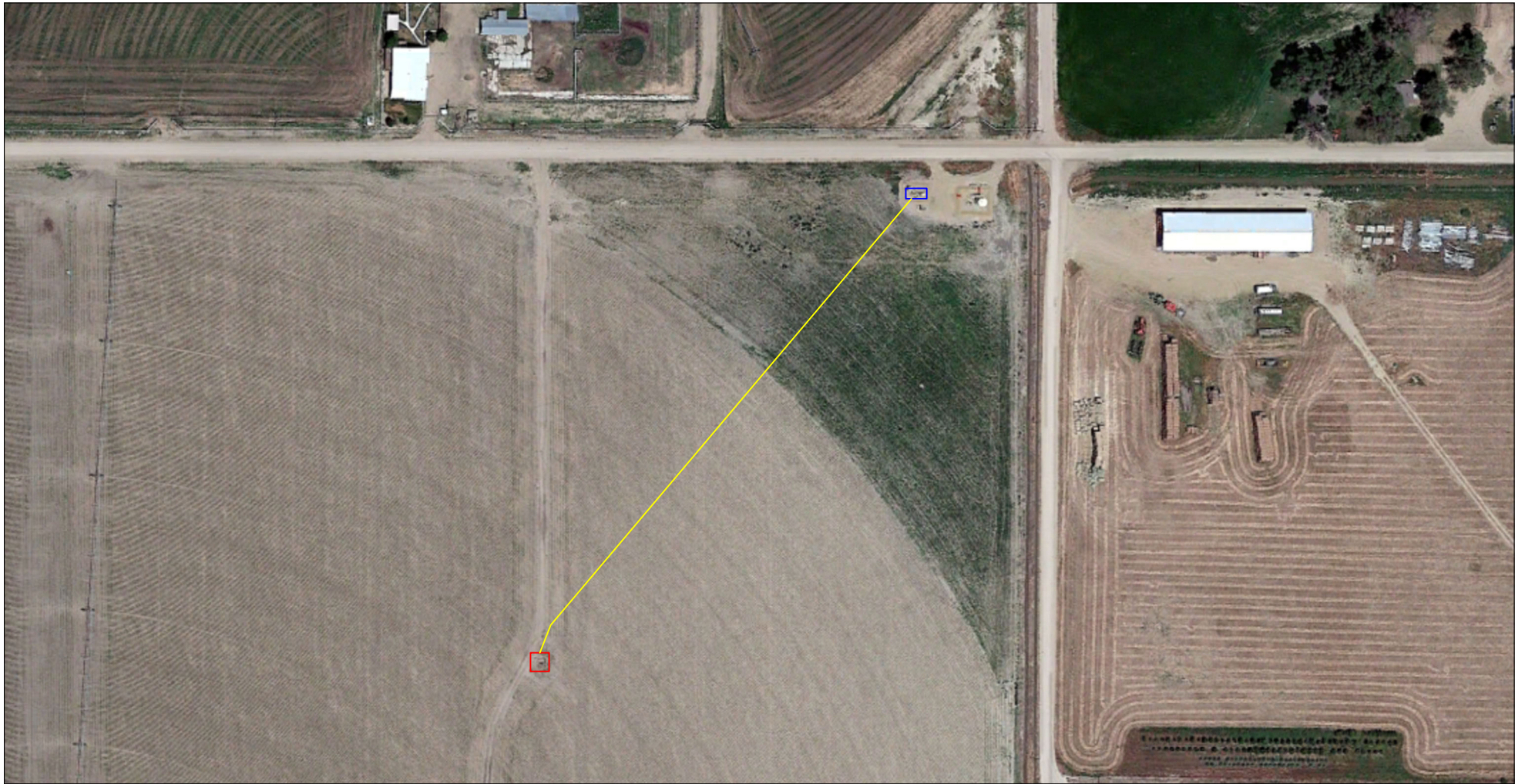


TOPOGRAPHIC SITE LOCATION MAP
 VOLKENS #2
 CLOSURE ASSESSMENT
 40.303360 / -104.520270
 NE¼ NW¼ SEC.23 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-12105
 REMEDIATION # 25964



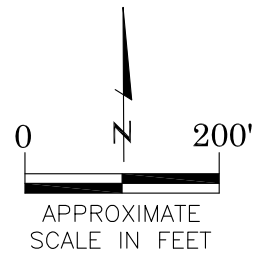
EAGLE
 ENVIRONMENTAL
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 Ph: 303-433-0479 • F: 303-325-5449



LEGEND

- FORMER VOLKENS #2 WELLHEAD (PLUGGED AND ABANDONED)
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP
 VOLKENS #2
 CLOSURE ASSESSMENT
 40.303360 / -104.520270
 NE¼ NW¼ SEC.23 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-12105
 REMEDIATION # 25964

FIGURE NO.
2

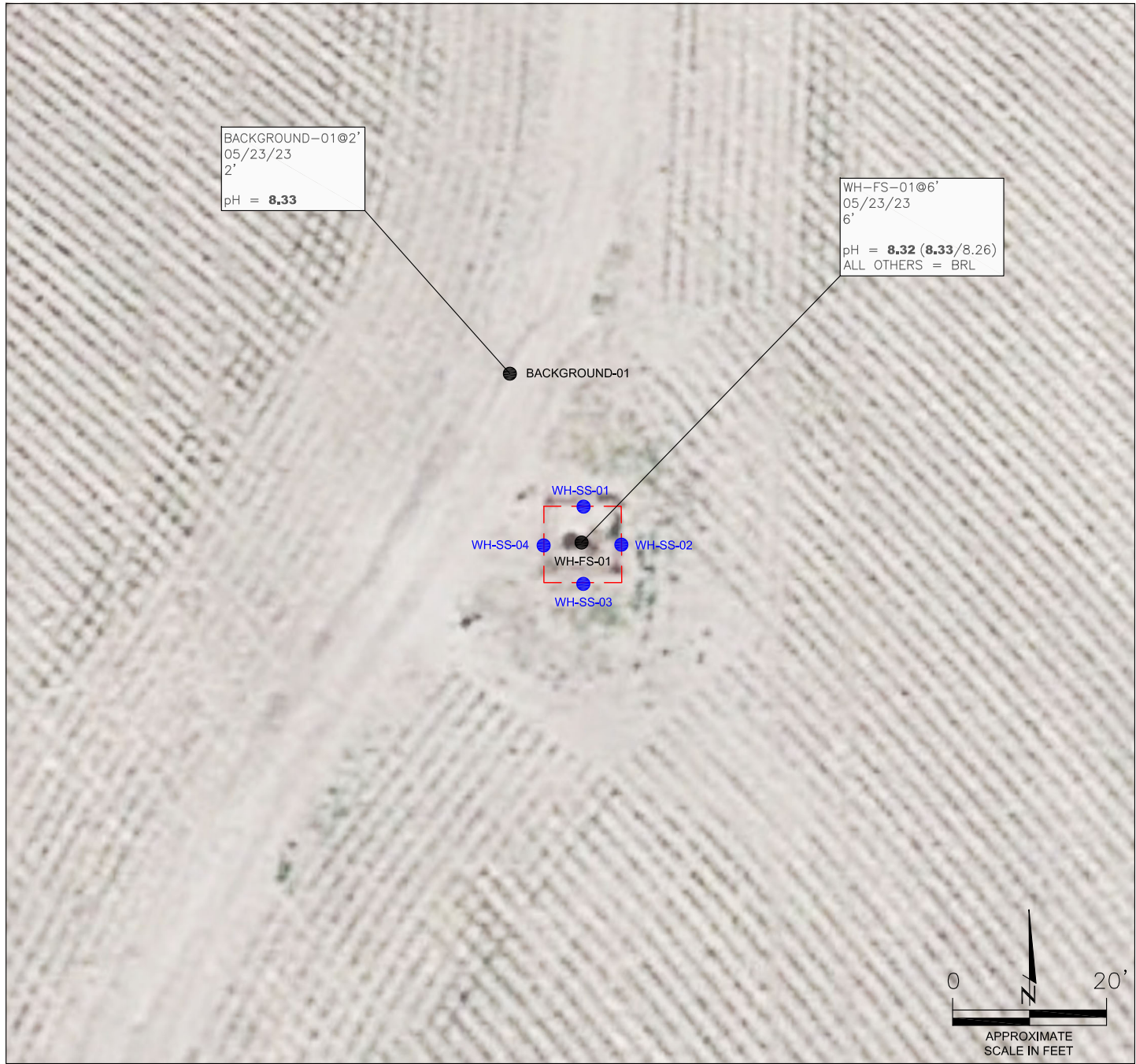
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BACKGROUND-01@2'
05/23/23
2'
pH = **8.33**

WH-FS-01@6'
05/23/23
6'
pH = **8.32 (8.33/8.26)**
ALL OTHERS = BRL

LEGEND

- WELLHEAD ASSESSMENT BOUNDARIES
- APPROXIMATE LOCATION OF SOIL SAMPLES FIELD SCREENED, ONLY, WITH PHOTOIONIZATION DETECTOR
- 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 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 = 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:
LABORATORY RERUNS WERE COMPLETED AS APPLICABLE ON SAMPLES WITH SOIL SUITABILITY VALUES OUTSIDE ECMC TABLE 915-1 REGULATORY RANGE. RESULTS OF THE RERUNS ARE PRESENTED IN PARENTHESES.

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

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

SOIL ANALYTICAL MAP
VOLKENS #2
CLOSURE ASSESSMENT
40.303360 / -104.520270
NE¼ NW¼ SEC.23 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-12105
REMEDATION # 25964

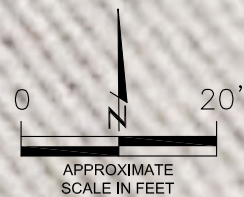


FIGURE NO.
3

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TABLES

Table 1: Photoionization Detector Reading Summary

Table 2: Soil Analytical Results Summary

TABLE 1
PHOTOIONIZATION DETECTOR READING SUMMARY
VOLKENS #2
CLOSURE ASSESSMENT
40.303360 / -104.520270
NE¼ NW¼ SEC.23 T4N R64W 6PM
WELD COUNTY, COLORADO
API # 05-123-12105
REMEDIATION # 25964

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.303373 / -104.520277)	05/23/23	5	5.2	N
WH-SS-02 @ 5' (40.303360 / -104.520257)	05/23/23	5	2.9	N
WH-SS-03 @ 5' (40.303344 / -104.520277)	05/23/23	5	1.4	N
WH-SS-04 @ 5' (40.303360 / -104.520296)	05/23/23	5	4.5	N
WH-FS-01 @ 6' (40.303360 / -104.520277)	05/23/23	6	7.5	Y
Background-01 @ 2' (40.303426 / -104.520316)	05/23/23	2	1.3	Y

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



TABLE 2
 SOIL ANALYTICAL RESULTS SUMMARY
 VOLKENS #2
 CLOSURE ASSESSMENT
 40.303360 / -104.520270
 NE¼ NW¼ SEC.23 T4N R64W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-12105
 REMEDIATION # 25964

Sample Location (Latitude / Longitude)		WH-FS-01 @ 6' (40.303360 / -104.520277)		Background-01 @ 2' (40.303426 / -104.520316)	
Sample Date		5/23/2023		5/23/2023	
Sample Depth		6'		2'	
PID Reading (ppm-v)		7.5		1.3	
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	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	<0.00201	NA
2-Methyl-naphthalene	mg/kg	24	0.019	<0.00201	NA
Acenaphthene	mg/kg	360	0.55	<0.00067	NA
Anthracene	mg/kg	1800	5.8	<0.00067	NA
Benzo(a)-anthracene	mg/kg	1.1	0.011	<0.00067	NA
Benzo(a)-pyrene	mg/kg	0.11	0.24	<0.00067	NA
Benzo(b)-fluoranthene	mg/kg	1.1	0.3	<0.00067	NA
Benzo(k)-fluoranthene	mg/kg	11	2.9	<0.00067	NA
Chrysene	mg/kg	110	9	<0.00067	NA
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	<0.00067	NA
Fluoranthene	mg/kg	240	8.9	<0.00067	NA
Fluorene	mg/kg	240	0.54	<0.00067	NA
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	<0.00067	NA
Pyrene	mg/kg	180	1.3	<0.00067	NA
SOIL SUITABILITY (Inorganics)					
Boron	mg/L	2	--	0.491	NA
pH	standard unit	6-8.3	--	8.32 (8.33/8.26)	8.33
Sodium Adsorption Ratio (SAR)	--	<6	--	3.61	NA
Specific Conductance (EC)	mmhos/cm	<4	--	0.799	NA
ECMC = Energy & Carbon Management Commission NA - Not Analyzed VOCs - Volatile Organic Compounds mg/kg = milligrams per kilogram mmhos/cm = millimhos per centimeter RSSLs = Residential Soil Screening Levels PID = Photoionization Detector GSSLs = Protection of Groundwater Soil Screening Levels ppm-v = parts per million by volume TPH-GRO = Total Petroleum Hydrocarbons - Gasoline Range Organics mg/L = milligrams per liter TPH-DRO = Total Petroleum Hydrocarbons - Diesel Range Organics SAR = Sodium Adsorption Ratio TPH-RRO = Total Petroleum Hydrocarbons - Residual Range Organics 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. Laboratory reruns were completed as applicable on samples with Soil Suitability values outside ECMC Table 915-1 Regulatory Range. Results of the reruns are presented in parentheses.					





ATTACHMENT A

Photo Log

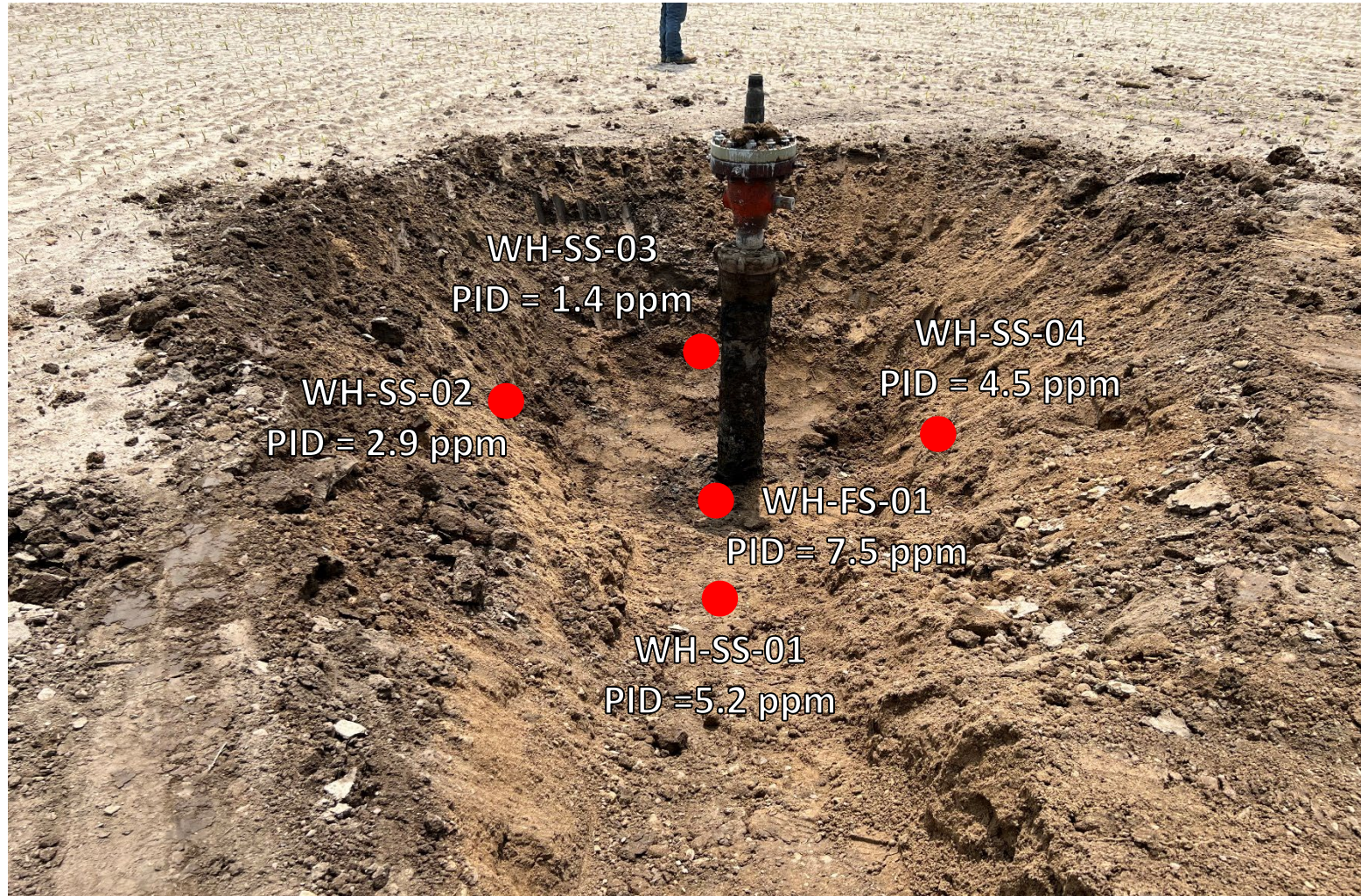
Volkens #2
API # 05-123-12105
Remediation # 25964

Closure Assessment

May 2023



Wellhead Excavation – 05/23/23



Looking south

No petroleum hydrocarbon staining or odor observed