

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: Shelton #18-25XX		Date: 7-27-23					Remediation Project #: 28440	
Associated Wells: 05-123-22169		Age of Site: years					Number of Photos Attached: 1	
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple)						40.286647 / -104.615767		Estimated Facility Size (acres):
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) Good condition								
USCS Soil Type: SC				Estimated Depth to Groundwater: ~10-15'				
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	05-123-22169							
Age	years							
Condition of surface around wellhead	Good - No odor/no staining							
PID Readings	WH-N: 0.7	WH-E: 0.2	WH-S: 1.8	WH-W: 1.2				
Condition of subsurface (staining present)	Good - No odor/no staining							
PID Readings	1.8	0.3	1.2	0.6	2.7			
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: Well casing cut/capped following assessment								
Summary								
Was impacted soil identified? <input checked="" type="radio"/> 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: 2.7				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="radio"/> 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:								

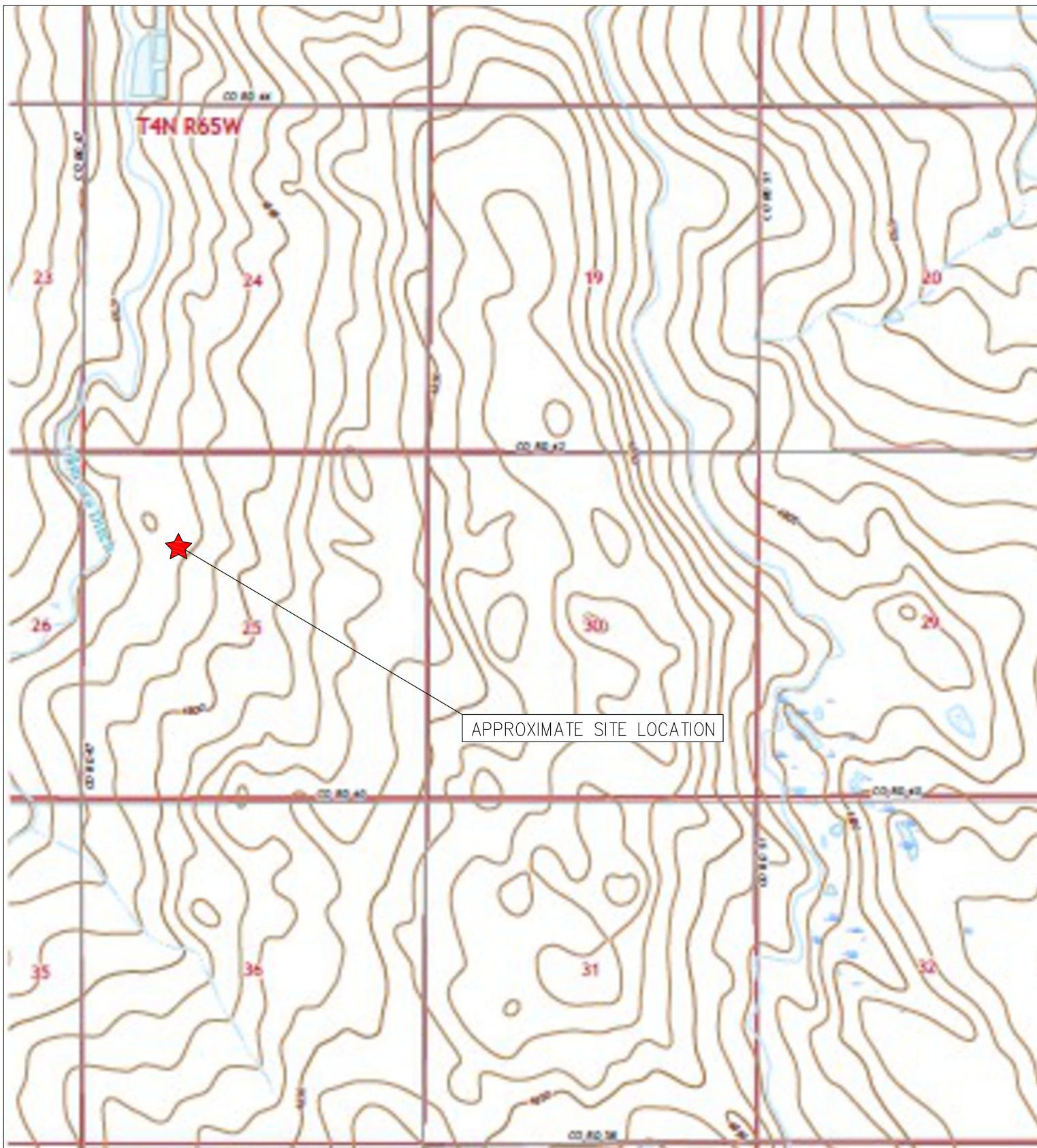


FIGURES

Figure 1: Topographic Site Location Map

Figure 2: Aerial Site Location Map

Figure 3: Soil Analytical Map



TOPOGRAPHIC SITE LOCATION MAP
 SHELTON #18-25XX
 CLOSURE ASSESSMENT
 40.286647 / -104.615767
 CNW¼ SEC.25 T4N R65W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-22196
 REMEDIATION # 28440



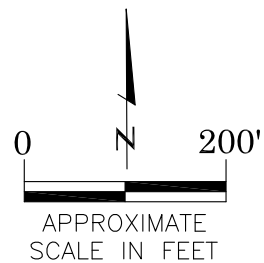
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LEGEND

- FORMER SHELTON #18-25XX WELLHEAD (PLUGGED AND ABANDONED)
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP
 SHELTON #18-25XX
 CLOSURE ASSESSMENT
 40.286647 / -104.615767
 CNW¼ SEC.25 T4N R65W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-22196
 REMEDIATION # 28440

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-CRO (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-CRO = 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
SHELTON #18-25XX
CLOSURE ASSESSMENT
40.286647 / -104.615767
CNW¼ SEC.25 T4N R65W 6PM
WELD COUNTY, COLORADO
API # 05-123-22196
REMEDATION # 28440

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
SHELTON #18-25XX
CLOSURE ASSESSMENT
40.286647 / -104.615767
CNW¼ SEC.25 T4N R65W 6PM
WELD COUNTY, COLORADO
API # 05-123-22169
REMEDATION # 28440

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-FS-01 @ 6' (40.286643 / -104.615769)	07/27/23	6	2.7	Y
WH-SS-01 @ 5' (40.286663 / -104.615767)	07/27/23	5	1.8	N
WH-SS-02 @ 5' (40.286644 / -104.615744)	07/27/23	5	0.3	N
WH-SS-03 @ 5' (40.286625 / -104.615768)	07/27/23	5	1.2	N
WH-SS-04 @ 5' (40.286645 / -104.615792)	07/27/23	5	0.6	N
WH-N @ 0.5' (40.286669 / -104.615777)	07/27/23	0.5	0.7	N
WH-E @ 0.5' (40.286640 / -104.615733)	07/27/23	0.5	0.2	N
WH-S @ 0.5' (40.286615 / -104.615771)	07/27/23	0.5	1.8	N
WH-W @ 0.5' (40.286642 / -104.615803)	07/27/23	0.5	1.2	N
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				

TABLE 2
SOIL ANALYTICAL RESULTS SUMMARY
SHELTON #18-25XX
CLOSURE ASSESSMENT
40.286647 / -104.615767
CNW¼ SEC.25 T4N R65W 6PM
WELD COUNTY, COLORADO
API # 05-123-22169
REMEDATION # 28440

Sample Location				WH-SS-01 @ 6'
(Latitude / Longitude)				(40.286643 / -104.615769)
Sample Date				7/27/2023
Sample Depth				6'
PID Reading (ppm-v)				2.7
Regulatory Limits				
Chemical of Concern	Units	ECMC Table 915-1 RSSLs	ECMC Table 915-1 GSSLs	
VOLATILE ORGANIC COMPOUNDS				
Benzene	mg/kg	1.2	0.0026	<0.00200
Toluene	mg/kg	490	0.69	0.00566
Ethylbenzene	mg/kg	5.8	0.78	0.0183
Total Xylenes	mg/kg	58	9.9	0.0325
Naphthalene	mg/kg	2	0.0038	<0.00380
1,2,4-Trimethylbenzene	mg/kg	30	0.0081	<0.00200
1,3,5-Trimethylbenzene	mg/kg	27	0.0087	0.00232
TOTAL PETROLEUM HYDROCARBONS				
TPH-GRO	mg/kg	500	--	<0.200
TPH-DRO	mg/kg	500	--	<25.0
TPH-RRO	mg/kg	500	--	<100
POLYCYCLIC AROMATIC HYDROCARBONS				
1-Methyl-naphthalene	mg/kg	18	0.006	<0.00201
2-Methyl-naphthalene	mg/kg	24	0.019	<0.00201
Acenaphthene	mg/kg	360	0.55	<0.00067
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	<0.00067
Dibenzo(a,h)-anthracene	mg/kg	0.11	0.096	<0.00067
Fluoranthene	mg/kg	240	8.9	<0.00067
Fluorene	mg/kg	240	0.54	<0.00067
Indeno(1,2,3-cd)-pyrene	mg/kg	1.1	0.98	0.00134
Pyrene	mg/kg	180	1.3	<0.00067
SOIL SUITABILITY (Inorganics)				
Boron	mg/L	2	--	1.08
pH	standard unit	6-8.3	--	8.07
Sodium Adsorption Ratio (SAR)	--	<6	--	0.188
Specific Conductance (EC)	mmhos/cm	<4	--	1.77
ECMC = Energy & Carbon Management Commission				
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		
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

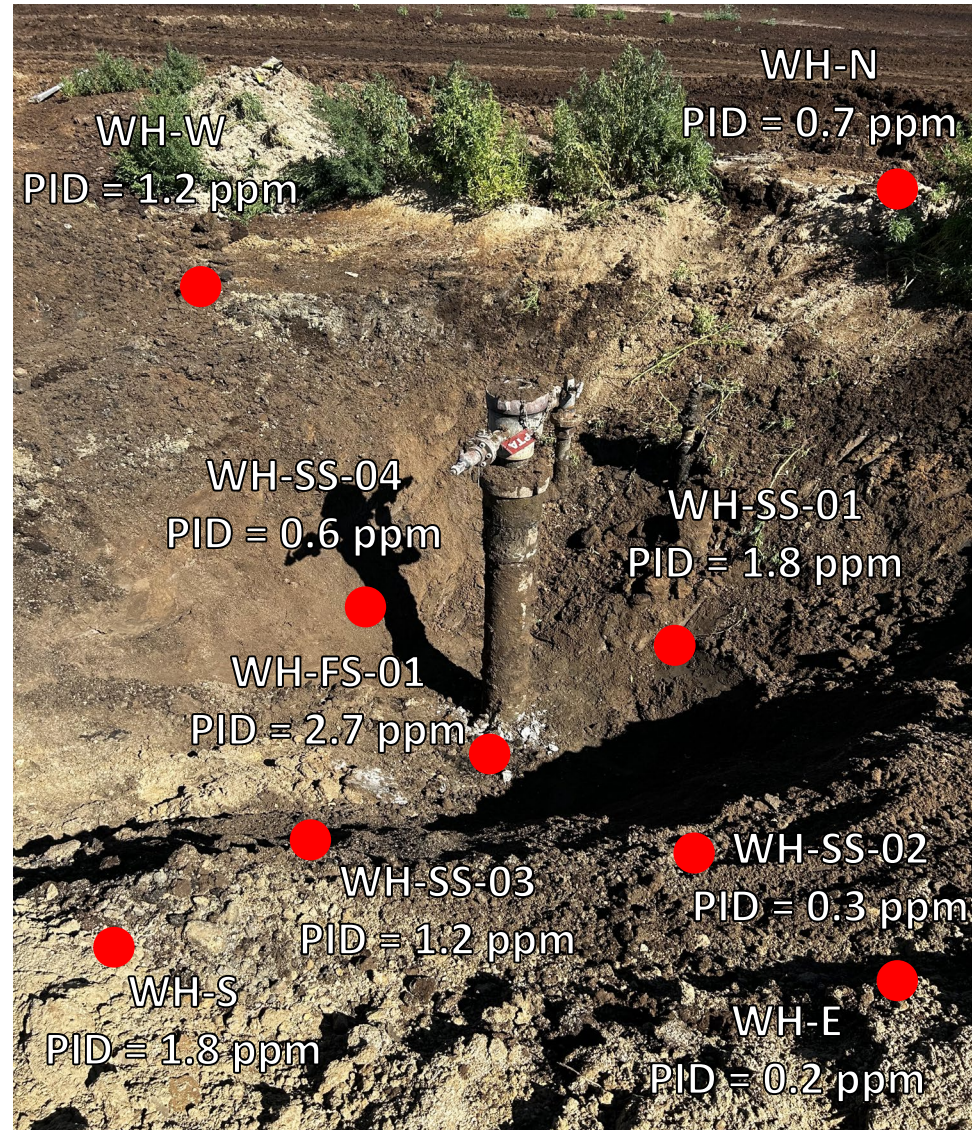
Shelton #18-25XX
API # 05-123-22169
Remediation # 28440

Closure Assessment

July 2023



Wellhead Excavation – 07/27/23



Looking northwest

No petroleum hydrocarbon staining or odor observed