

# Wellhead Closure Checklist

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

Additional attachments (optional): <u>      </u>		Pit Closure <u>      </u>		Tank Battery Closure <u>      </u>		Flowline Closure: <u>      </u>		Partially Buried Vault Closure <u>      </u>	
Site Name & COGCC Facility Number: <b>Parker #29-34</b>		Date: <b>01/23/23</b>				Remediation Project #: <b>26176</b>			
Associated Wells: <b>05-123-20684</b>		Age of Site: <b>years</b>				Number of Photos Attached: <b>1</b>			
Location: (GPS coordinates of wellhead or southeastern most wellhead for multiple) <b>40.104950 / -104.573210</b>						Estimated Facility Size (acres): <u>      </u>			
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.) <b>Good condition</b>									
USCS Soil Type: <b>sandy CLAY</b>				Estimated Depth to Groundwater: <b>~10-15'</b>					
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>None observed</b>									
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) <b>None observed</b>									
Wellhead(s)									
Well API	<b>05-123-20684</b>								
Age	<b>years</b>								
Condition of surface around wellhead	<b>Good - Per Crew</b>								
PID Readings	<b>N/A - Excavated upon arrival</b>								
Condition of subsurface (staining present)	<b>Good - No odor/no staining</b>								
PID Readings	<b>3.6</b>	<b>4.1</b>	<b>4.3</b>	<b>2.3</b>	<b>4.8</b>				
Sample taken? Location/Sample ID#	<b>WH-SS-01</b>	<b>WH-SS-02</b>	<b>WH-SS-03</b>	<b>WH-SS-04</b>	<b>WH-FS-01</b>				
Photo Number(s)	<b>See photo log</b>								
Other observations regarding wellheads: <b>Well casing cut/capped following assessment</b>									
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: <b>5</b>				Total number of samples collected: <b>5</b>					
Highest PID Reading: <b>4.8</b>				Total number of samples submitted to lab for analysis: <b>1</b>					
If more than 10 cubic yards of impacted soil were observed:									
Vertical extent:				Estimated spill volume:					
<b>N/A</b>									
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:									

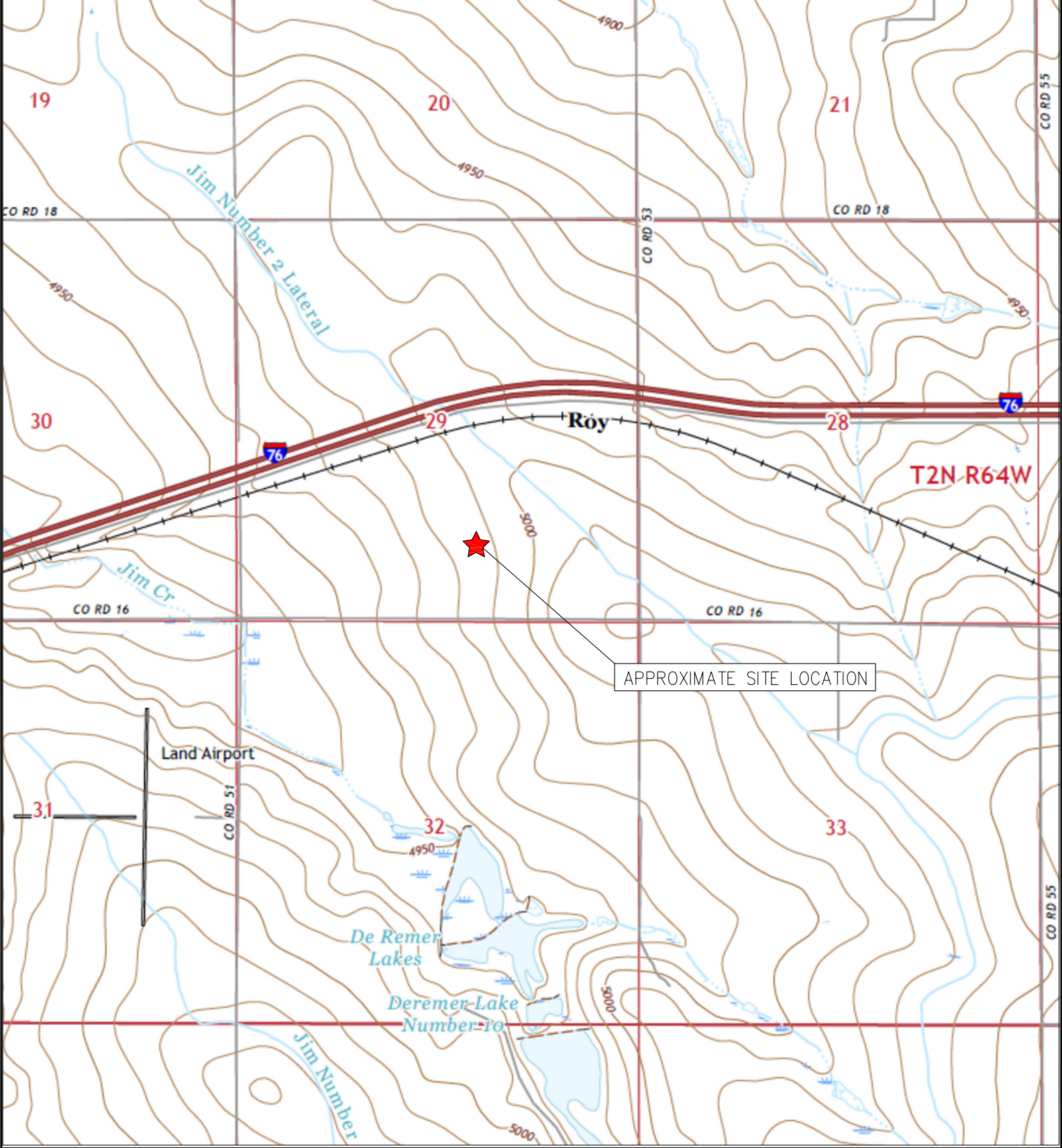


## **FIGURES**

**Figure 1: Topographic Site Location Map**

**Figure 2: Aerial Site Location Map**

**Figure 3: Soil Analytical Map**



APPROXIMATE SITE LOCATION

TOPOGRAPHIC SITE LOCATION MAP  
 PARKER #29-34  
 CLOSURE ASSESSMENT  
 40.104950 / -104.573210  
 SW¼ SE¼ SEC.29 T2N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-20684  
 REMEDIATION # 26176



**EAGLE**  
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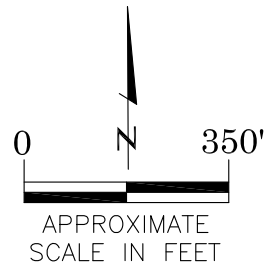
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,  
 KEENESBURG, CO QUADRANGLE 2022

FIGURE 1



LEGEND

- FORMER PARKER #29-34 WELLHEAD (PLUGGED AND ABANDONED)
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION



AERIAL SITE LOCATION MAP  
 PARKER #29-34  
 CLOSURE ASSESSMENT  
 40.104950 / -104.573210  
 SW¼ SE¼ SEC.29 T2N R64W 6PM  
 WELD COUNTY, COLORADO  
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FIGURE NO.

2

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**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)
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 COGCC TABLE 915-1 REGULATORY LIMITS.

COGCC = COLORADO OIL AND GAS CONSERVATION COMMISSION

SOIL ANALYTICAL MAP  
 PARKER #29-34  
 CLOSURE ASSESSMENT  
 40.104950 / -104.573210  
 SW¼ SE¼ SEC.29 T2N R64W 6PM  
 WELD COUNTY, COLORADO  
 API # 05-123-20684  
 REMEDIATION # 26176

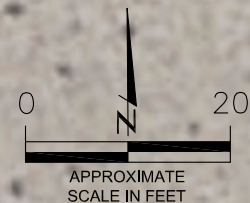


FIGURE NO.  
3

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## **TABLES**

**Table 1: Photoionization Detector Reading Summary**

**Table 2: Soil Analytical Results Summary**

**TABLE 1**  
**PHOTOIONIZATION DETECTOR READING SUMMARY**  
**PARKER #29-34**  
**CLOSURE ASSESSMENT**  
**40.104950 / -104.573210**  
**SW¼ SE¼ SEC.29 T2N R64W 6PM**  
**WELD COUNTY, COLORADO**  
**API # 05-123-20684**  
**REMEDIATION # 26176**

Sample Location (Latitude/Longitude)	Date	Approximate Depth (feet)	PID Reading (ppm-v)	Lab Submission (Y/N)
WH-SS-01 @ 5' (40.104949 / -104.573206)	01/23/23	5	3.6	N
WH-SS-02 @ 5' (40.104937 / -104.573190)	01/23/23	5	4.1	N
WH-SS-03 @ 5' (40.104925 / -104.573206)	01/23/23	5	4.3	N
WH-SS-04 @ 5' (40.104936 / -104.573223)	01/23/23	5	2.3	N
WH-FS-01 @ 6' (40.104936 / -104.573206)	01/23/23	6	4.8	Y
(Y/N) = Yes or No ppm-v = parts per million by volume PID = Photoionization Detector				



TABLE 2  
SOIL ANALYTICAL RESULTS  
PARKER #29-34  
CLOSURE ASSESSMENT  
40.104950 / -104.573210  
SW¼ SE¼ SEC.29 T2N R64W 6PM  
WELD COUNTY, COLORADO  
API # 05-123-20684  
REMEDIATION # 26176

Sample Location		WH-FS-01 @ 6'		
(Latitude / Longitude)		(40.104936 / -104.573206)		
Sample Date		1/23/2023		
Sample Depth		6'		
PID Reading (ppm-v)		4.8		
Regulatory Limits				
Chemical of Concern	Units	COGCC Table 915-1 RSSLs	COGCC Table 915-1 GSSLs	
<b>VOCs</b>				
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	<0.00200
<b>TOTAL PETROLEUM HYDROCARBONS</b>				
TPH-GRO	mg/kg	500	--	<0.200
TPH-DRO	mg/kg	500	--	<25.0
TPH-RRO	mg/kg	500	--	<100
<b>POLYCYCLIC AROMATIC HYDROCARBONS</b>				
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	<0.00067
Naphthalene	mg/kg	2	0.0038	<0.00201
Pyrene	mg/kg	180	1.3	<0.00067
<b>SOIL SUITABILITY (Inorganics)</b>				
Boron	mg/L	2	--	0.474
pH	standard unit	6-8.3	--	7.92
Sodium Adsorption Ratio (SAR)	--	<6	--	3.36
Specific Conductance (EC)	mmhos/cm	<4	--	1.47
COGCC = Colorado Oil and Gas Conservation 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 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 <b>BOLD</b> exceed COGCC Table 915-1 Regulatory Limits.				
VOCs - Volatile Organic Compounds 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				



## **ATTACHMENT A**

### **Photo Log**

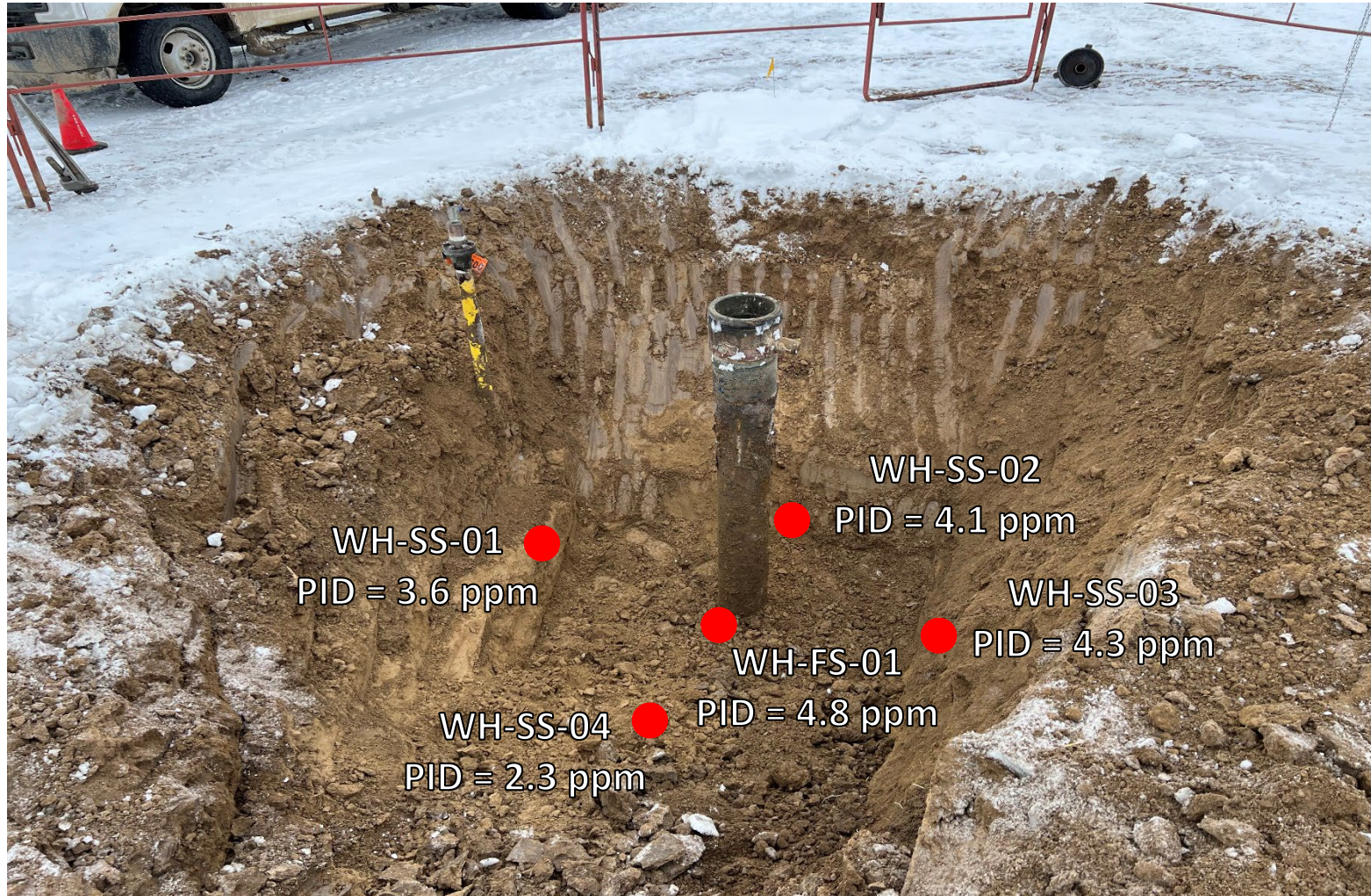
Parker #29-34  
API # 05-123-20684  
Remediation # 26176

Closure Assessment

January 2023



# Wellhead Excavation – 01/23/23



Looking east

No petroleum hydrocarbon staining or odor observed