

Flowline Closure Checklist

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

Additional Attachments:	-	Tank Battery Closure	-	Wellhead Closure	-	Pit Closure	-	Partially Buried Vault Closure	-	
Site Name & COGCC Facility Number:		Date:		Remediation Project #:						
Wolfe USX CC #7-25		4/24/24		33031						
Associated Wells:		Age of Site:		Number of Photos Attached:						
05-123-27357		years		2						

Starting point: (GPS coordinates and descriptions)
 40.323621 / -104.485115

End point: (GPS coordinates and descriptions)
 40.326736 / -104.482748

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

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
None

Flowlines

Flowline type	OGW								
Depth	4'								
Age	years								
Length	~1,483'								
Construction Material	Steel								
Were flowlines pulled?	No								
Visual Integrity of lines	Good								
Visual impacts if trenched	None								
PID Readings if trenched	1.3	0.4							
Sample taken? Location/Sample ID#	FL-SS-01	FL-SS-02							
Photo Number(s)	See photolog								

Other observations regarding on location flowlines:
Flowline abandoned in place

Summary

Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: 4 Total number of samples collected: 4

Highest PID Reading: 2.7 Total number of samples submitted to lab for analysis: 2

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?
 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:



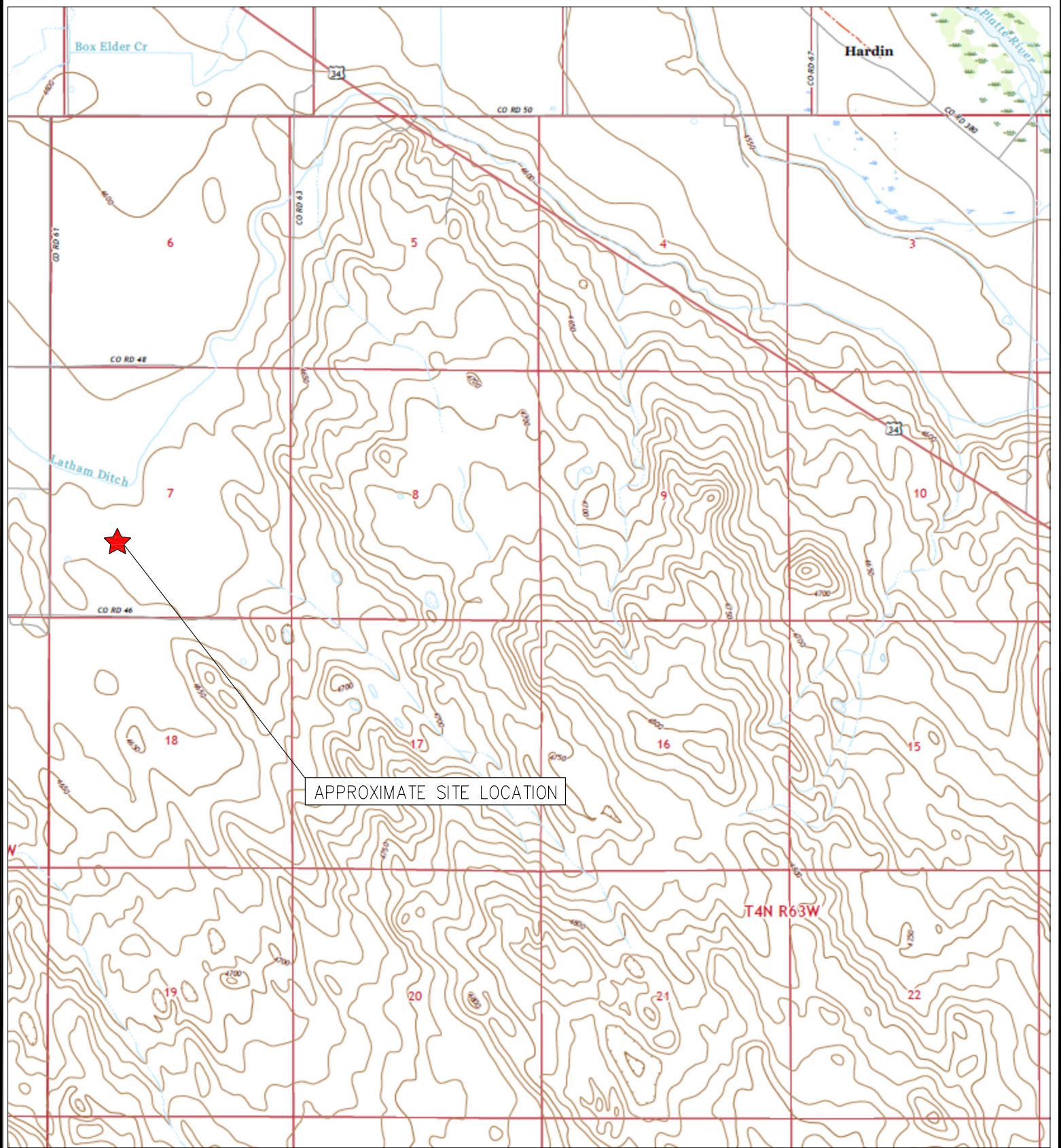
FIGURES

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
 WOLFE USX CC #7-25
 CLOSURE ASSESSMENT
 40.323635 / -104.485123
 NE¼ SW¼ SEC.7 T4N R63W 6PM
 WELD COUNTY, COLORADO
 API # 05-123-27357
 REMEDIATION # 33031



EAGLE
 ENVIRONMENTAL
 CONSULTING, LLC

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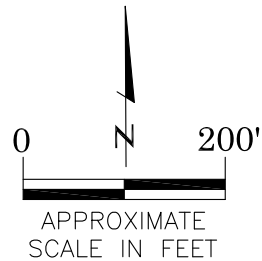
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP,
 HARDIN, CO QUADRANGLE 2022

FIGURE NO. 1



LEGEND

- FORMER WOLFE USX CC #7-25 WELLHEAD
- ASSOCIATED SEPARATOR
- APPROXIMATE FLOWLINE LOCATION (ABANDONED IN PLACE)



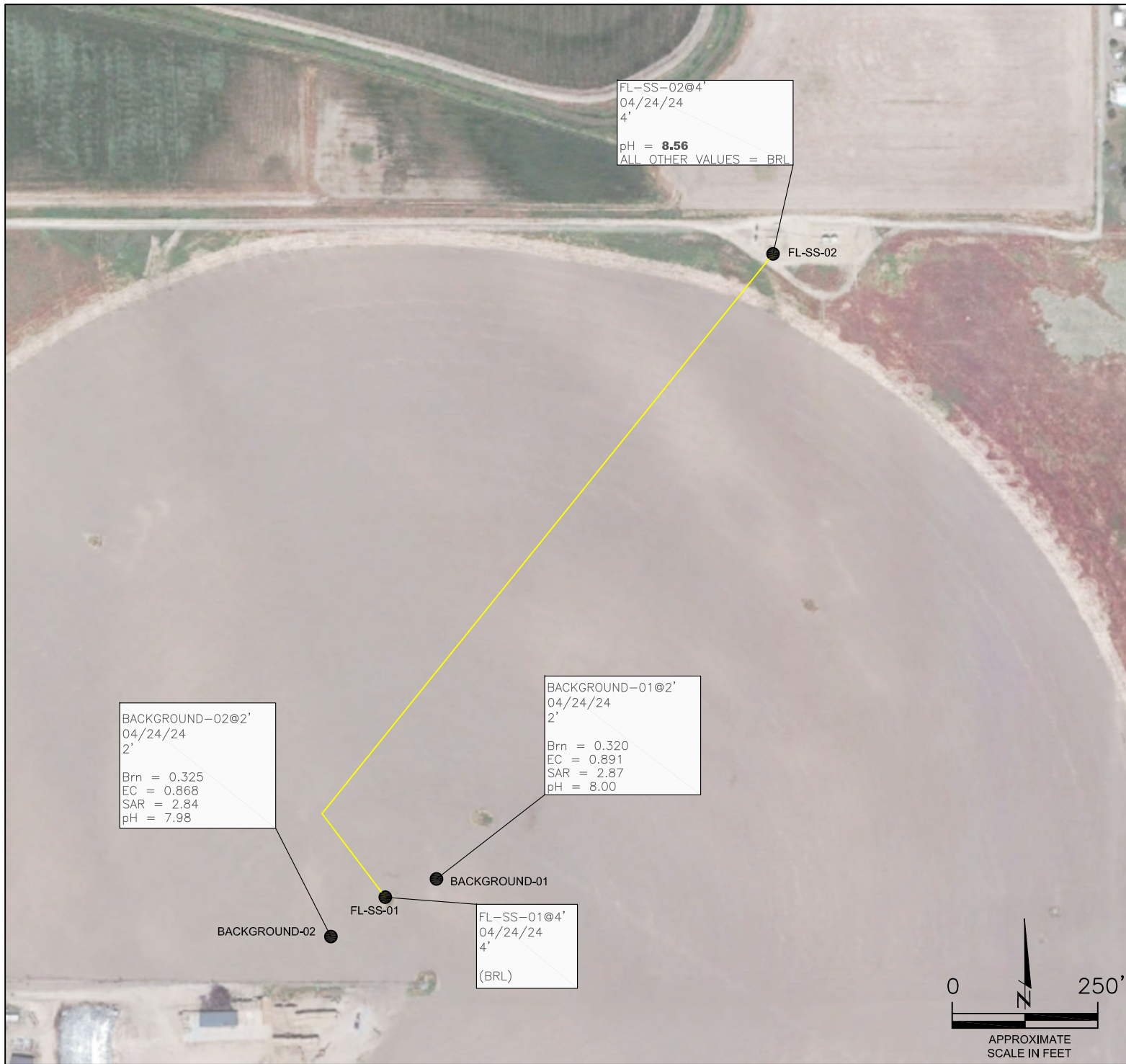
AERIAL SITE LOCATION MAP
WOLFE USX CC #7-25
CLOSURE ASSESSMENT
40.323635 / -104.485123
NE¼ SW¼ SEC.7 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-27357
REMEDIAION # 33031

FIGURE NO.
2

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FL-SS-02@4'
04/24/24
4'
pH = **8.56**
ALL OTHER VALUES = BRL

FL-SS-02

BACKGROUND-01@2'
04/24/24
2'
Brn = 0.320
EC = 0.891
SAR = 2.87
pH = 8.00

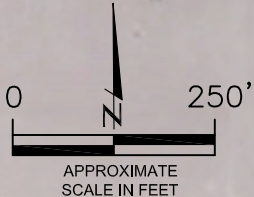
BACKGROUND-01

BACKGROUND-02@2'
04/24/24
2'
Brn = 0.325
EC = 0.868
SAR = 2.84
pH = 7.98

BACKGROUND-02

FL-SS-01@4'
04/24/24
4'
(BRL)

FL-SS-01



LEGEND

- APPROXIMATE FLOWLINE LOCATION (ABANDONED IN PLACE)
- 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 TRIMETHYLBENZENE (mg/kg)
1,3,5-TMB = 1,3,5 TRIMETHYLBENZENE (mg/kg)
Brn= BORON (mg/L)
pH = pH (pH UNITS)
SAR= SODIUM ADSORPTION RATIO
EC = SPECIFIC CONDUCTANCE (mmhos/cm)
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
(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

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

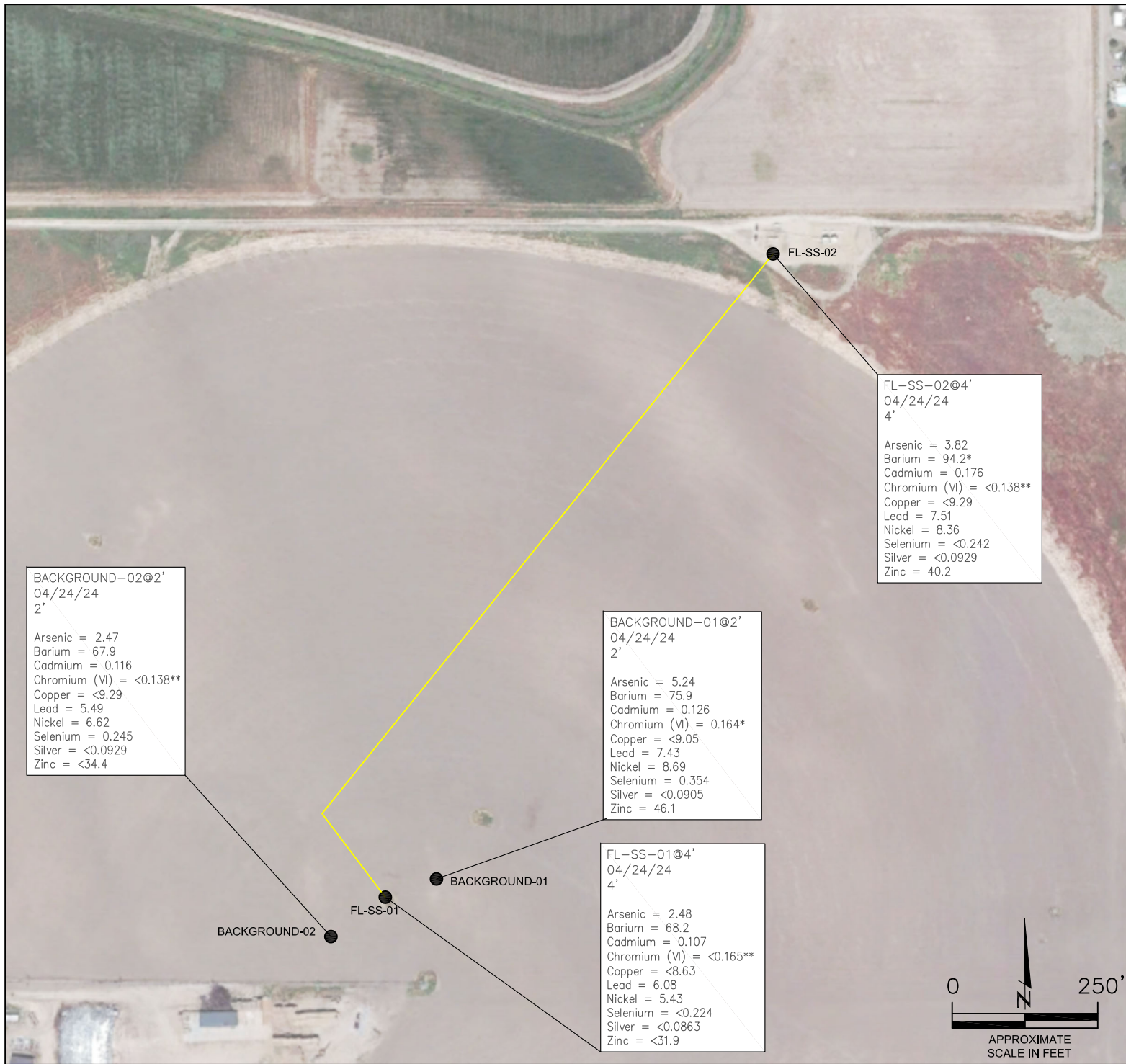
ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

SOIL ANALYTICAL MAP
WOLFE USX CC #7-25
CLOSURE ASSESSMENT
40.323635 / -104.485123
NE¼ SW¼ SEC.7 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-27357
REMIATION # 33031

FIGURE NO.
3

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8000 W 44th Ave, Wheat Ridge, CO 80033
Ph: 303-433-0479 • F: 303-325-5449



BACKGROUND-02@2'
04/24/24
2'

Arsenic = 2.47
Barium = 67.9
Cadmium = 0.116
Chromium (VI) = <0.138**
Copper = <9.29
Lead = 5.49
Nickel = 6.62
Selenium = 0.245
Silver = <0.0929
Zinc = <34.4

BACKGROUND-01@2'
04/24/24
2'

Arsenic = 5.24
Barium = 75.9
Cadmium = 0.126
Chromium (VI) = 0.164*
Copper = <9.05
Lead = 7.43
Nickel = 8.69
Selenium = 0.354
Silver = <0.0905
Zinc = 46.1

FL-SS-01@4'
04/24/24
4'

Arsenic = 2.48
Barium = 68.2
Cadmium = 0.107
Chromium (VI) = <0.165**
Copper = <8.63
Lead = 6.08
Nickel = 5.43
Selenium = <0.224
Silver = <0.0863
Zinc = <31.9

FL-SS-02@4'
04/24/24
4'

Arsenic = 3.82
Barium = 94.2*
Cadmium = 0.176
Chromium (VI) = <0.138**
Copper = <9.29
Lead = 7.51
Nickel = 8.36
Selenium = <0.242
Silver = <0.0929
Zinc = 40.2

LEGEND

- APPROXIMATE FLOWLINE LOCATION (ABANDONED IN PLACE)
- 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.

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

VALUES PRESENTED IN **BOLD** EXCEED ECMC TABLE 915-1 REGULATORY LIMITS AND APPLICABLE LOCAL CLEAN-UP LEVELS.

*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.

ECMC = ENERGY & CARBON MANAGEMENT COMMISSION

METALS IN SOIL MAP
WOLFE USX CC #7-25
CLOSURE ASSESSMENT
40.323635 / -104.485123
NE¼ SW¼ SEC.7 T4N R63W 6PM
WELD COUNTY, COLORADO
API # 05-123-27357
REMIEDIATION # 33031

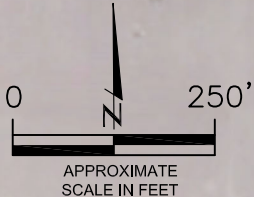


FIGURE NO.
4

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TABLES

Table 1: Field Data Summary Table

Table 2: Summary of Volatile Organic Soil Chemistry Data

Table 3: Summary of PAHs Soil Chemistry Data

Table 4: Summary of Soil Suitability for Reclamation

Table 5: Summary of Metals in Soil Chemistry Data

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE ENERGY 100322
WOLFE USX CC #7-25, WELD COUNTY, COLORADO
REM # 33031

Sample ID	Sample Date	Depth	GPS Data		VOC Concentration (ppm)
			Latitude	Longitude	
FL-SS-01 @ 4'	4/24/2024	4	40.323633	-104.485112	1.3
FL-SS-02 @ 4'	4/24/2024	4	40.326712	-104.482733	0.4
Background-01 @ 2'	4/24/2024	2	40.323696	-104.484856	2.6
Background-02 @ 2'	4/24/2024	2	40.323453	-104.485454	2.7

1. Global Positioning System (GPS) data is provided in decimal degrees using North American Datum (NAD) 83 UTMZone 13 North.

2. Volatile organic compound (VOC) concentrations are measured in the field using a photoionization detector (PID).

PDOP = Position Dilution of Precision

ppm = Parts per million

in. = Inches

ft. = Feet

bgs = Below ground surface

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY 100322
WOLFE USX CC #7-25, WELD COUNTY, COLORADO
REM # 33031

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4-Trimethyl-Benzene (mg/kg)	1,3,5-Trimethyl-Benzene (mg/kg)	Naphthalene (mg/kg)	TPH (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500	500**		
FL-SS-01 @ 4'	4/24/2024	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380	<500	<0.200	<25.0	<100
FL-SS-02 @ 4'	4/24/2024	4	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<0.00380	<500	<0.200	<25.0	<100

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

3. * Indicates laboratory minimum detection limit in excess of SSL

4. ** Summation of GRO+DRO+ORO must be less than 500 mg/kg

NA - Not analyzed

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY 100322
WOLFE USX CC #7-25, WELD COUNTY, COLORADO
REM # 33031

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl-Naphthalene (mg/kg)	2-Methyl-Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL-SS-01 @ 4'	4/24/2024	4	<0.020	<0.020	<0.005	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002
FL-SS-02 @ 4'	4/24/2024	4	<0.020	<0.020	0.006	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.002	<0.002

1. Bold values exceed the ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

3. * Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY 100322
WOLFE USX CC #7-25, WELD COUNTY, COLORADO
REM # 33031

Sample ID	Sample Date	Depth (ft)	pH (Standard Units)	EC (mmhos/cm)	SAR (Standard Units)	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	4	6	2
FL-SS-01 @ 4'	4/24/2024	4	8.26	0.627	1.78	0.180
FL-SS-02 @ 4'	4/24/2024	4	8.56	0.337	2.25	0.262
Background-01 @ 2'	4/24/2024	2	8.00	0.891	2.87	0.320
Background-02 @ 2'	4/24/2024	2	7.98	0.868	2.84	0.325
Maximum Background Concentration			8.00	0.891	2.87	0.325
Average Background Concentration			7.99	0.880	2.86	0.323

1. Bold faced values exceed the ECMC Table 915-1 limit(s)

2. Blue highlighted soil analytical values indicate a regulatory exceedance

Laboratory reruns may be conducted on samples with pH results exceeding ECMC Table 915-1 regulatory range. Results of the reruns will be presented in parentheses.

NA - Not analyzed

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY 100322
WOLFE USX CC #7-25, WELD COUNTY, COLORADO
REM # 33031

Sample ID	Sample Date	Depth (ft)	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)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL-SS-01 @ 4'	4/24/2024	4	2.48	68.2	0.107	<0.165*	<8.63	6.08	5.43	<0.224	<0.0863	<31.9
FL-SS-02 @ 4'	4/24/2024	4	3.82	94.2	0.176	<0.138*	<9.29	7.51	8.36	<0.242	<0.0929	40.2
Background-01 @ 2'	4/24/2024	2	5.24	75.9	0.126	0.164	<9.05	7.43	8.69	0.354	<0.0905	46.1
Background-02 @ 2'	4/24/2024	2	2.47	67.9	0.116	<0.138*	<9.29	5.49	6.62	0.245	<0.0929	<34.4
Maximum Background Concentration			5.24	75.9	0.126	0.164	ND	7.43	8.69	0.354	ND	46.1
Local Clean-up Level (125% Maximum Background Concentration)			6.55	94.9	0.158	0.205	--	9.29	10.9	0.443	--	57.6

1. Bold values exceed the local clean-up levels & ECMC Table 915-1 limit(s)

2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

Elevated metals are naturally occurring in Colorado. Local clean-up levels are 1.25*Maximum Background Concentration, where applicable.

* Indicates laboratory minimum detection limit in excess of SSL

** Achievable practical quantitative limits for Hexavalent Chromium in soils is in the range of 0.1 to 1.0 mg/kg

NA - Not analyzed

ND - Not Detected



ATTACHMENT A

Photo Log

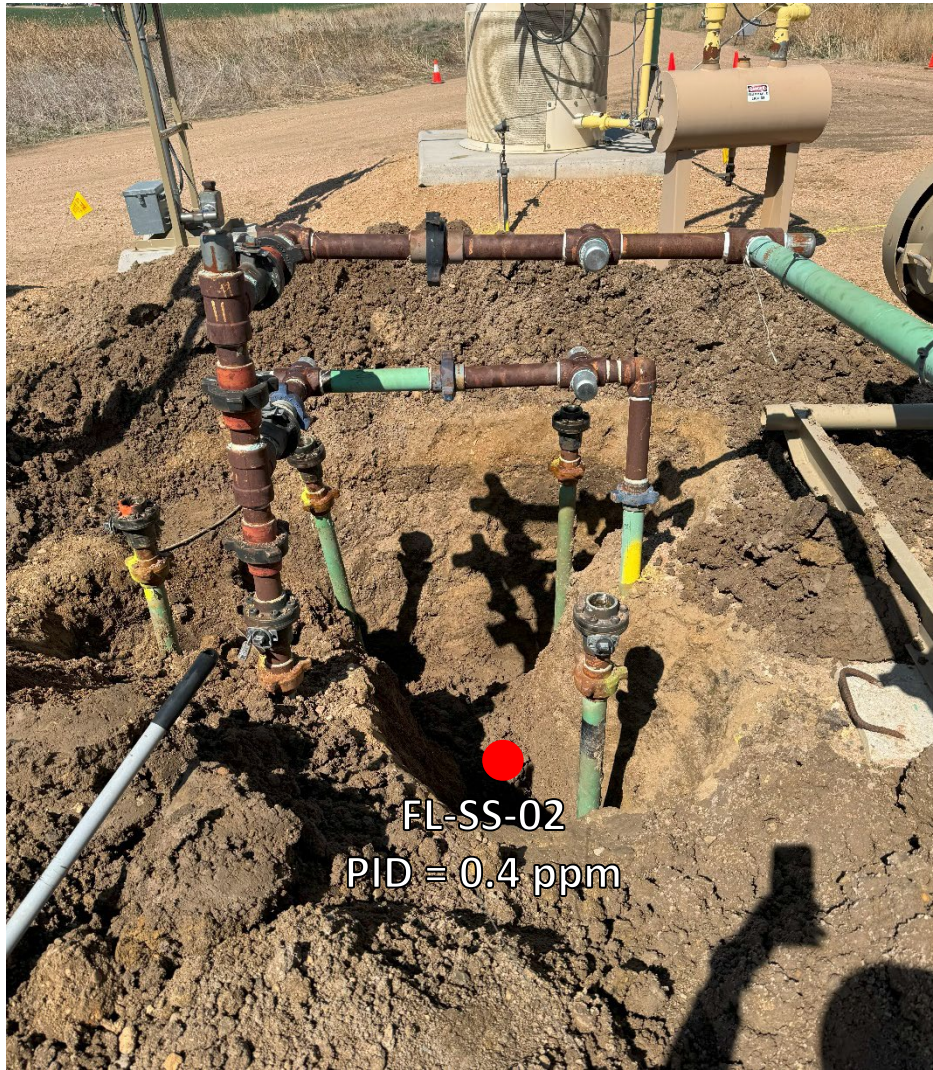
Wolfe USX CC #7-25
API # 05-123-27357
Remediation # 33031

Closure Assessment

April 2024



Flowline Removal/Assessment – 04/24/24



Looking west flowline Pt B/terminus at separator

No petroleum hydrocarbon staining or odor observed



Looking east at flowline Pt A

No petroleum hydrocarbon staining or odor observed