

FREMONT ENVIRONMENTAL INC.

August 23, 2024

Mr. Daniel Peterson
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80634

Subject: **Flowline Closure Data Submittal**
Vega USX A03-05
API # 05-123-33459
SWNW Sec. 3, T6N, R64W
Weld County, Colorado
Fremont Project No. C024-045
Remediation # 33853

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted flowline closure activities for the Noble Energy Inc. (Noble) Vega USX A03-05. Impacted soil was not encountered during abandonment activities. Details of the Vega USX A03-05 closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline removal activities.

Please contact me at (303) 261-6246 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Stanley Gilbert
Environmental Scientist

Attachments:

Facility Closure Checklist
Tables
Figures
Photos

Flowline Closure Checklist

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

<i>Additional Attachments:</i>		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
<i>Site Name & COGCC Facility Number:</i> Vega USX A03-05 (API: 05-123-33459)		<i>Date:</i> 02/24/2024				<i>Remediation Project #:</i> 33853		
<i>Associated Wells:</i>		<i>Age of Site:</i> 2011				<i>Number of Photos Attached:</i> See Attached		

Starting point: (GPS coordinates and descriptions)
40.5219289, -104.5410645

End point: (GPS coordinates and descriptions)
40.51697942, -104.5426374

USCS Soil Type: SP *Estimated Depth to Groundwater:* >4'

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

Flowlines

<i>Flowline type</i>	OIL/Water/Gas							
<i>Depth</i>	2'- 3'							
<i>Age</i>	2011							
<i>Length</i>	1863'							
<i>Construction Material</i>	Steel							
<i>Were flowlines pulled?</i>	Yes							
<i>Visual Integrity of lines</i>	Good							
<i>Visual impacts if trenched</i>	N/A							
<i>PID Readings if trenched</i>	Highest PID 2.7ppm							
<i>Sample taken? Location/Sample ID#</i>	Yes, See Attached							
<i>Photo Number(s)</i>	See Attached							

Other observations regarding on location flowlines:

Summary

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

Total number of samples field screened: 10 *Total number of samples collected:* 10

Highest PID Reading: High @ 2.7ppm (FL02 3') *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:

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE 100322
VEGA USX A03-05, WELD COUNTY, COLORADO
REM # 33853

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
FL07 2'	02/26/2024	2'	40.5186663	-104.5423604	-	0.0
FL01 3'	02/23/2024	3'	40.5219271	-104.5410660	-	0.6
FL02 3'	02/26/2024	3'	40.5213038	-104.5412762	-	2.7
FL03 3'	02/26/2024	3'	40.5208332	-104.5414778	-	1.3
FL04 3'	02/26/2024	3'	40.5203008	-104.5416824	-	0.5
FL05 3'	02/26/2024	3'	40.5197874	-104.5418757	-	0.6
FL06 3'	02/26/2024	3'	40.5192640	-104.5420937	-	0.6
FL08 3'	02/26/2024	3'	40.5180654	-104.5425299	-	0.4
FL09 3'	02/26/2024	3'	40.5175224	-104.5425832	-	0.3
FL10 3'	02/26/2024	3'	40.5170143	-104.5426365	-	0.2
BKG01	02/26/2024	0.5', 3', 4'	40.5223753	-104.5412026	-	0.0
BKG02	02/26/2024	0.5', 3', 4'	40.5223707	-104.5409156	-	0.0
BKG03	02/26/2024	0.5', 3', 4'	40.5198372	-104.5420227	-	0.0
BKG04	02/26/2024	0.5', 3', 4'	40.5168942	-104.5424607	-	0.0
BKG05	02/26/2024	0.5', 3', 4'	40.5170159	-104.5428501	-	0.0

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 100322
VEGA USX A03-05, WELD COUNTY, COLORADO
REM # 33853

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**		
FL01 3'	02/23/2024	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL10 3'	02/26/2024	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50

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
- (<) = Analytical result is less than the indicated laboratory reporting limit.
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
TPH-DRO = Total petroleum hydrocarbons - diesel range organics
TPH-ORO = Total petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
ft. = Feet
bgs = Below ground surface
NA - Not analyzed

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE 100322
VEGA USX A03-05, WELD COUNTY, COLORADO
REM # 33853

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
FL01 3'	02/23/2024	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL10 3'	02/26/2024	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

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
- (<) = Analytical result is less than the indicated laboratory reporting limit.
TPH-GRO = Total petroleum hydrocarbons - gasoline range organics
TPH-DRO = Total petroleum hydrocarbons - diesel range organics
TPH-ORO = Total petroleum hydrocarbons - oil range organics
mg/kg = Milligrams per kilogram
ft. = Feet
bgs = Below ground surface
NA - Not analyzed

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE 100322
VEGA USX A03-05, WELD COUNTY, COLORADO
REM # 33853

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
FL01 3'	02/23/2024	3'	8.18	0.351	0.404	<2.00
FL10 3'	02/26/2024	3'	8.24	0.469	0.878	<2.00
BKG01 0.5'	02/26/2024	0.5'	7.85	0.301	0.236	<2.00
BKG02 0.5'	02/26/2024	0.5'	7.99	0.246	0.169	<2.00
BKG03 0.5'	02/26/2024	0.5'	8.45	0.215	0.121	<2.00
BKG04 0.5'	02/26/2024	0.5'	8.34	0.208	0.192	<2.00
BKG05 0.5'	02/26/2024	0.5'	7.65	0.221	0.171	<2.00
BKG01 3'	02/26/2024	3'	8.54	0.354	2.11	<2.00
BKG02 3'	02/26/2024	3'	8.95	0.276	2.22	<2.00
BKG03 3'	02/26/2024	3'	8.08	0.980	1.29	<2.00
BKG04 3'	02/26/2024	3'	8.22	0.898	0.950	<2.00
BKG05 3'	02/26/2024	3'	8.18	0.144	0.119	<2.00
BKG01 4'	02/26/2024	4'	8.44	1.07	4.11	<2.00
BKG02 4'	02/26/2024	4'	8.05	3.00	3.34	<2.00
BKG03 4'	02/26/2024	4'	7.85	1.23	1.44	<2.00
BKG04 4'	02/26/2024	4'	8.20	0.180	0.212	<2.00
BKG05 4'	02/26/2024	4'	7.64	0.182	0.196	<2.00
Maximum Background Concentration		0.5'	8.45	0.301	0.236	<2.00
Maximum Background Concentration		3'	8.95	0.980	2.22	<2.00
Maximum Background Concentration		4'	8.44	3.00	4.11	<2.00

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within background concentrations.

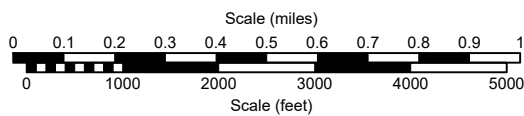
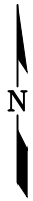
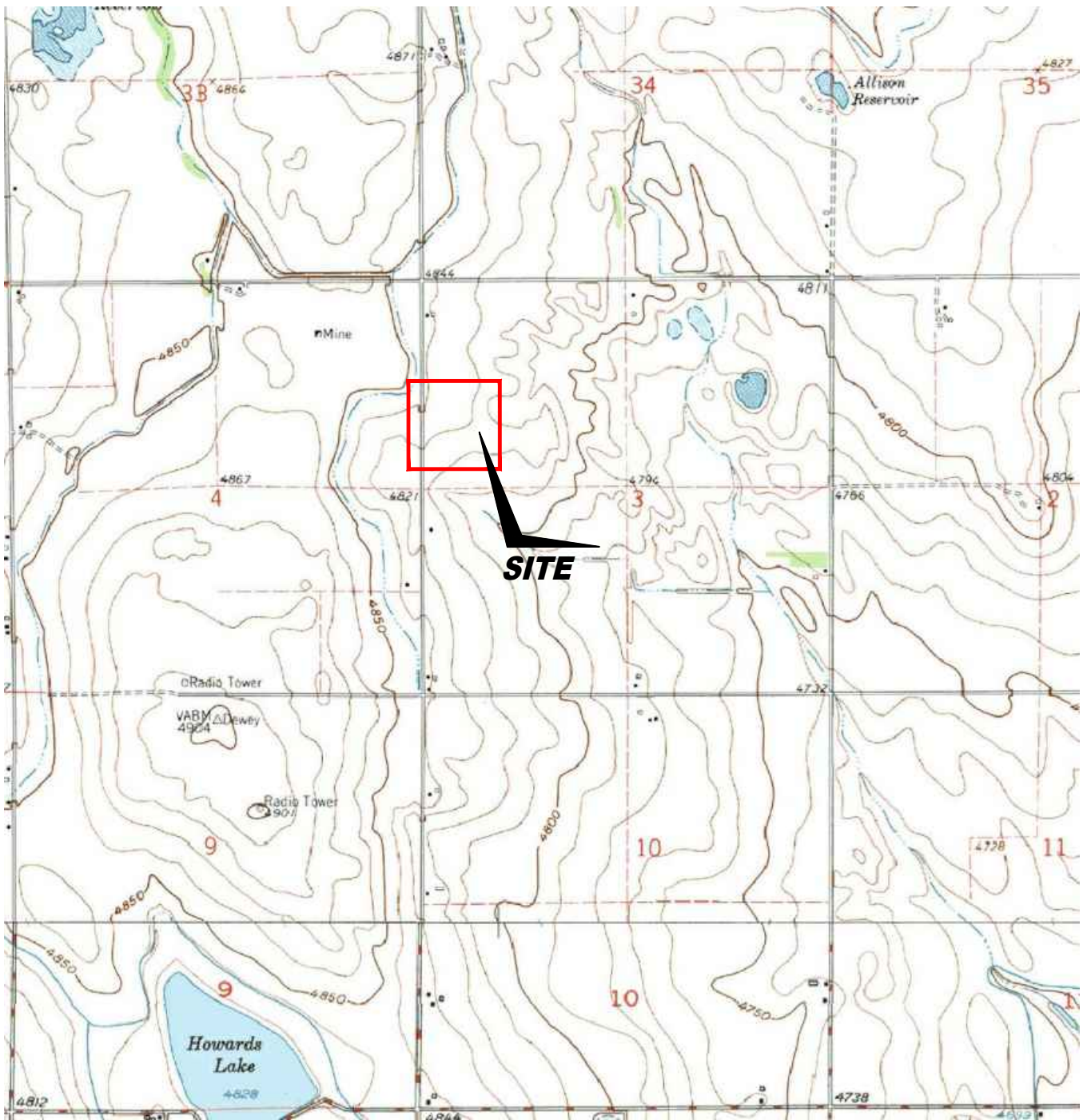
2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.

3. Brown highlighted soil analytical values indicate a regulatory exceedance.

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE 100322
VEGA USX A03-05, WELD COUNTY, COLORADO
REM # 33853

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
FL01 3'	02/23/2024	3'	3.55	56.5	<0.200	<0.30	3.69	5.69	3.67	<0.260	0.0322	14.5
FL10 3'	02/26/2024	3'	2.39	66.0	<0.200	<0.30	3.71	5.72	3.28	<0.260	0.0337	15.3
BKG01 0.5'	02/26/2024	0.5'	2.57	42.6	<0.200	<0.30	3.70	5.47	2.95	<0.260	<0.0200	15.0
BKG02 0.5'	02/26/2024	0.5'	3.11	72.8	0.245	<0.30	5.22	8.14	4.47	<0.260	0.0286	19.8
BKG03 0.5'	02/26/2024	0.5'	2.93	40.6	<0.200	<0.30	3.74	5.76	3.87	<0.260	0.0242	15.0
BKG04 0.5'	02/26/2024	0.5'	3.12	40.5	<0.200	<0.30	3.57	5.60	3.37	<0.260	0.0215	15.4
BKG05 0.5'	02/26/2024	0.5'	2.64	41.7	<0.200	<0.30	3.72	5.63	3.40	<0.260	0.0208	15.9
BKG01 3'	02/26/2024	3'	2.65	66.8	<0.200	<0.30	3.10	4.93	3.40	<0.260	0.0232	12.8
BKG02 3'	02/26/2024	3'	2.30	41.5	<0.200	<0.30	2.80	4.32	3.23	<0.260	<0.0200	11.5
BKG03 3'	02/26/2024	3'	3.28	355	0.214	<0.30	5.87	10.2	3.68	<0.260	0.0372	12.3
BKG04 3'	02/26/2024	3'	2.76	45.9	<0.200	<0.30	2.61	4.04	3.07	<0.260	<0.0200	11.4
BKG05 3'	02/26/2024	3'	3.37	103	<0.200	<0.30	3.62	6.20	4.45	<0.260	0.0273	17.1
BKG01 4'	02/26/2024	4'	2.42	44.5	<0.200	<0.30	2.40	3.89	3.34	<0.260	<0.0200	10.5
BKG02 4'	02/26/2024	4'	2.49	57.4	0.208	<0.30	2.68	4.97	3.95	<0.260	<0.0200	11.2
BKG03 4'	02/26/2024	4'	4.00	73.1	0.239	<0.30	4.88	8.41	4.98	<0.260	0.0317	20.6
BKG04 4'	02/26/2024	4'	3.12	76.8	0.241	<0.30	4.13	6.56	4.69	<0.260	0.0288	17.8
BKG05 4'	02/26/2024	4'	3.31	81.6	0.251	<0.30	4.15	6.62	4.93	<0.260	0.0277	17.2
1.25x Maximum Background Concentration		0.5'	3.90	91.0	0.306	<0.30	6.53	10.2	5.59	<0.260	0.0358	24.8
1.25x Maximum Background Concentration		3'	4.21	444	0.268	<0.30	7.34	12.8	5.56	<0.260	0.0465	21.4
1.25x Maximum Background Concentration		4'	5.00	102	0.314	<0.30	6.10	10.5	6.23	<0.260	0.0396	25.8

1. **Bold** faced values exceed the ECMC Table 915-1 limit(s), but are within 1.25x background concentrations.
 2. **Bold** faced values exceed the ECMC Table 915-1 limit(s) and native background concentrations.
 3. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL).
 4. Non-detect background results accounted for in the highest background concentration by using the reporting limit.
- ECMC = Energy & Carbon Management Commission
(<) = Analytical result is less than the indicated laboratory reporting limit.
mg/kg = Milligrams per kilogram
ft. = Feet
bgs = Below ground surface
* Indicates laboratory minimum detection limit in excess of SSL
NA - Not analyzed/Not applicable



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ~ VEGA USX A03-05
 SWNW Sec. 3, T6N, R64W, 6th PM
 Weld County, Colorado
 40.516990°, -104.542660°

Project No. CO24-045	API # 05-123-33459	Facility #
Date 9/18/24	Remediation # 33853	Filename 24045TFL





LEGEND

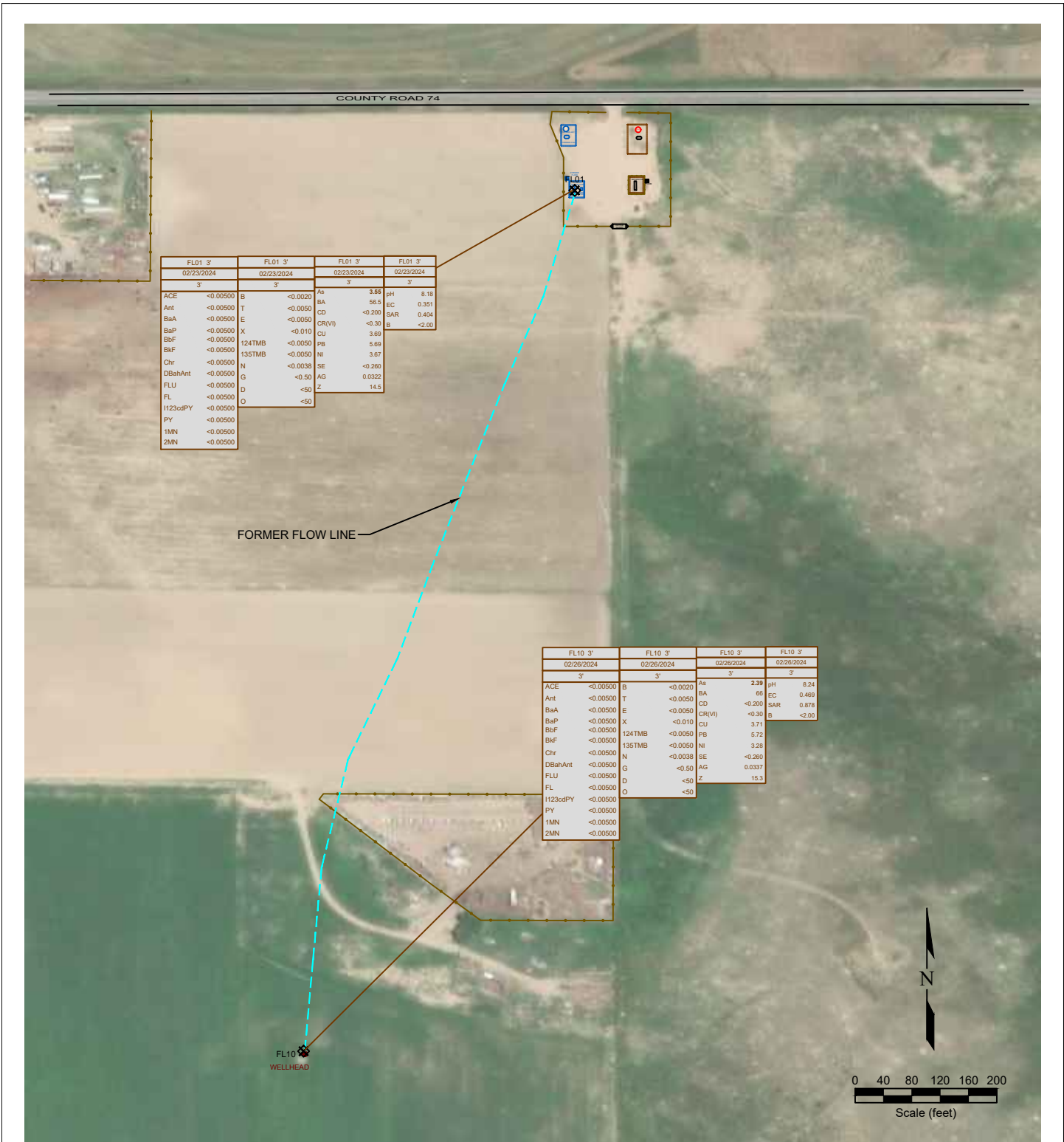
- WELL HEAD LOCATION
- ABOVE GROUND STORAGE TANK
- ▲ PID READING LOCATION
- FORMER FLOW LINE
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL
- FORMER FACILITY

**Figure 2
SITE MAP**

NOBLE ~ VEGA USX A03-05
 SWNW Sec. 3, T6N, R64W, 6th PM
 Weld County, Colorado
 40.516990°, -104.542660°

Project No. CO24-045	API # 05-123-33459	Facility #
Date 9/18/24	Remediation # 33853	Filename 24045QFL





FL01 3'		FL01 3'		FL01 3'		FL01 3'	
02/23/2024		02/23/2024		02/23/2024		02/23/2024	
3'		3'		3'		3'	
ACE	<0.00500	B	<0.0020	As	3.58	pH	8.18
Ant	<0.00500	T	<0.0050	BA	56.9	EC	0.351
BaA	<0.00500	E	<0.0050	CD	<0.200	SAR	0.404
BaP	<0.00500	X	<0.010	CR(VI)	<0.30	B	<2.00
BbF	<0.00500	124TMB	<0.0050	CU	3.68		
BbF	<0.00500	135TMB	<0.0050	PB	5.69		
Chr	<0.00500	N	<0.0038	NI	3.67		
DBahAnt	<0.00500	G	<0.50	SE	<0.260		
FLU	<0.00500	D	<50	AG	0.0322		
FL	<0.00500	O	<50	Z	14.5		
H123cdPY	<0.00500						
PY	<0.00500						
1MN	<0.00500						
2MN	<0.00500						

FL10 3'		FL10 3'		FL10 3'		FL10 3'	
02/26/2024		02/26/2024		02/26/2024		02/26/2024	
3'		3'		3'		3'	
ACE	<0.00500	B	<0.0020	As	2.39	pH	8.24
Ant	<0.00500	T	<0.0050	BA	66	EC	0.469
BaA	<0.00500	E	<0.0050	CD	<0.200	SAR	0.878
BaP	<0.00500	X	<0.010	CR(VI)	<0.30	B	<2.00
BbF	<0.00500	124TMB	<0.0050	CU	3.31		
BbF	<0.00500	135TMB	<0.0050	PB	5.72		
Chr	<0.00500	N	<0.0038	NI	3.28		
DBahAnt	<0.00500	G	<0.50	SE	<0.260		
FLU	<0.00500	D	<50	AG	0.0337		
FL	<0.00500	O	<50	Z	15.3		
H123cdPY	<0.00500						
PY	<0.00500						
1MN	<0.00500						
2MN	<0.00500						

LEGEND

- WELL HEAD LOCATION
- ABOVE GROUND STORAGE TANK
- ⊗ SOIL SAMPLE LOCATION
- FORMER FLOW LINE
- FORMER FACILITY
- FENCE LINE
- CONTAINMENT BERM
- CONTAINMENT WALL
- NOT ANALYZED

SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID
DATE	DATE	DATE	DATE
DEPTH	DEPTH	DEPTH	DEPTH
ACE	As	As	As
ACENAPHTHENE (mg/kg)	BENZENE (mg/kg)	ARSENIC (mg/kg)	ARSENIC (mg/kg)
Ant	T	BA	BARUM (mg/kg)
ANTHRACENE (mg/kg)	TOLUENE (mg/kg)	CD	CADMIUM (mg/kg)
BaA	E	CR(VI)	CHROMIUM (mg/kg)
BENZO (A) ANTHRACENE (mg/kg)	ETHYLBENZENE (mg/kg)	CU	COPPER (mg/kg)
BaP	X	PB	LEAD (mg/kg)
BENZO (B) FLUORANTHENE (mg/kg)	TOTAL XYLENES (mg/kg)	NI	NICKEL (mg/kg)
BbF	1,2,4-TRIMETHYLBENZENE (mg/kg)	SE	SELENIUM (mg/kg)
BENZO (K) FLUORANTHENE (mg/kg)	1,3,5-TRIMETHYLBENZENE (mg/kg)	AG	SILVER (mg/kg)
Chr	CHRYSENE (mg/kg)	Z	ZINC (mg/kg)
DBahAnt	DBENZ (A,H) ANTHRACENE (mg/kg)		
FLU	FLUORANTHENE (mg/kg)		
FL	FLUCRENE (mg/kg)		
H123cdPY	INDENO (1,2,3-CD) PYRENE (mg/kg)		
PY	PYRENE (mg/kg)		
1MN	1-METHYLNAPHTHALENE (mg/kg)		
2MN	2-METHYLNAPHTHALENE (mg/kg)		

Figure 3
SOIL CHEMISTRY MAP

NOBLE ~ VEGA USX A03-05
SWNW Sec. 3, T6N, R64W, 6th PM
Weld County, Colorado
40.516990°, -104.542660°

Project No. CO24-045	API # 05-123-33459	Facility #
Date 9/18/24	Remediation # 33853	Filename 24045QFL

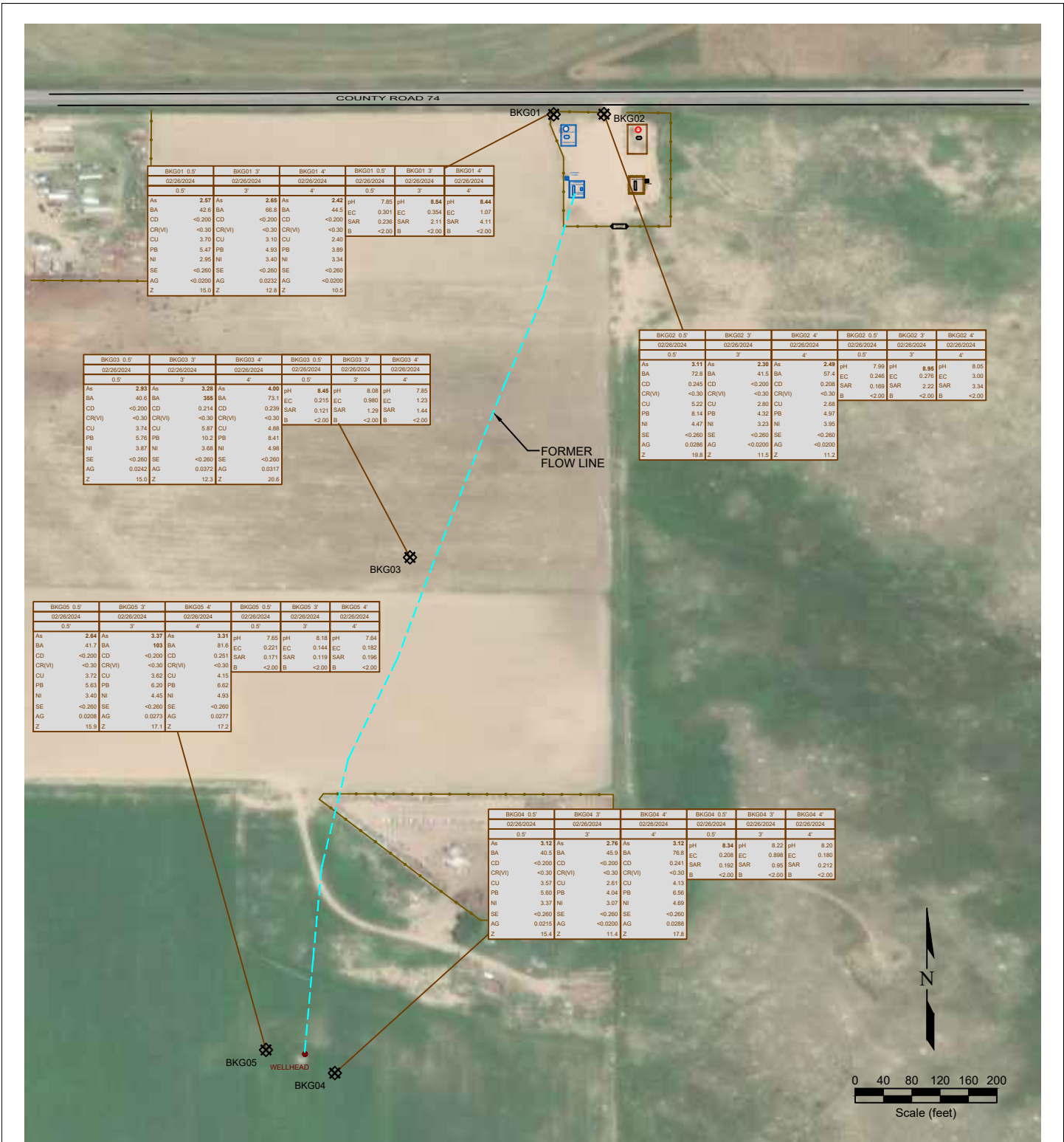
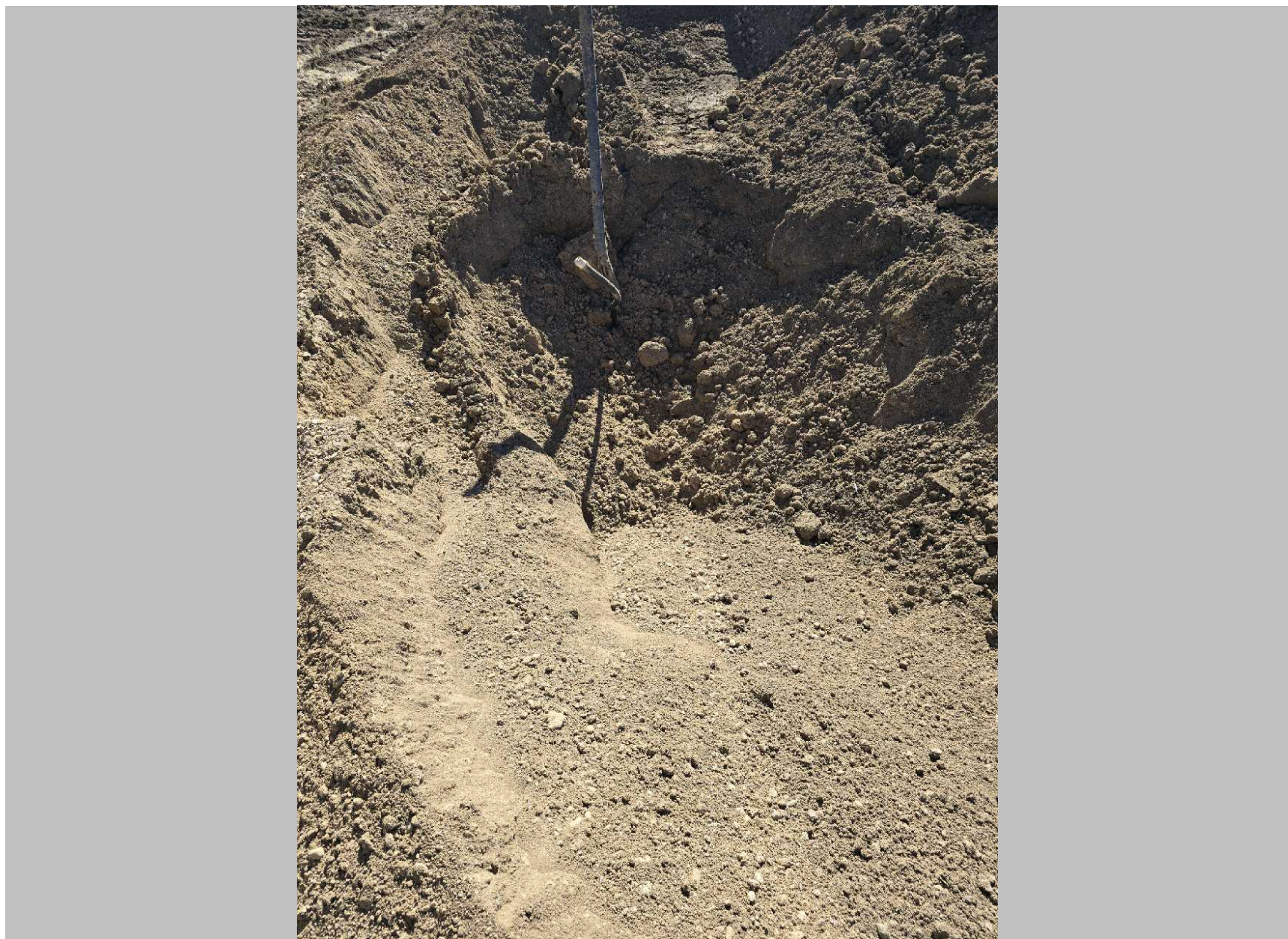


Figure 4
BACKGROUND SAMPLE SOIL CHEMISTRY MAP

NOBLE ~ VEGA USX A03-05
SWNW Sec. 3, T6N, R64W, 6th PM
Weld County, Colorado
40.516990°, -104.542660°

Project No. CO24-045	API # 05-123-33459	Facility #
Date 9/18/24	Remediation # 33853	Filename 24045QFLBKG





Description:

#1-FL01 3'- No visual staining or odor



Description:

#2-FL02 3'- No visual staining or odor



Description:

#3-FL03 3'- No visual staining or odor



Description:

#4-FL04 3'- No visual staining or odor

Photo Log



Description:

#5-FL05 3'- No visual staining or odor

Photo Log



Description:

#6-FL06 3'- No visual staining or odor

Photo Log



Description:

#7-FL07 2'- No visual staining or odor

Photo Log



Description:

#8-FL08 3'- No visual staining or odor



Description:

#9-FL09 3'- No visual staining or odor



Description:

#10-FL10 3'- No visual staining or odor