



<b>SITE NAME:</b> Feuerstein I28-63-1HN							<b>DATE:</b> 5/6/2024	<b>REM. PROJECT #:</b> 33105	<b>WEATHER:</b> 50s sunny/windy	
<b>SITE DIRECTIONS:</b> CR29/CR64, 0.1N, 0.1E into							<b>CLIENT:</b> Noble			
<b>LEGALS AND LAT/LONG:</b> 40.456706, -104.791279							<b>TASMAN PERSONNEL:</b> David Vigil			
<b>SOIL TYPES:</b> Silty Sand - SM							<b>SURFACE GRADIENT:</b> East			
<b>SOIL SAMPLING</b>							<b>FACILITY INFRASTRUCTURE</b>			
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT		Quantity	
							Above Ground Storage Tank (AST)			
5/6/2024 11:55	FLR01-S @ 4'	0.0	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel			
5/6/2024 12:25	FLR01-W @ 4'	0.1	No Staining	No Odor	Yes	Lab	Separator			
							Emission Control Device (ECD)			
							Dump Line			
							Wellhead			
							Flowline		1	
							Other:			
							<b>Soil Loads Removed</b>			
							<b>IMPACTED SOIL IDENTIFIED?</b>			
							<b>ESTIMATED VOLUME OF IMPACTS:</b>			
							<b>Date</b>	<b>Number</b>	<b>CY</b>	
							<b>Total Removed</b>		0	
							0		0	
							<b>Disposal Facility:</b>			
							<b>Groundwater Recovery</b>			
							<b>DATE GW ENCOUNTERED:</b>		<b>DEPTH:</b>	
							<b>GROUNDWATER IN CONTACT WITH IMPACTED SOIL?</b>			
							<b>LNAPL OR SHEEN OBSERVED ON GW?</b>			
<b>GROUNDWATER SAMPLING</b>							<b>Date</b>	<b>BBLs</b>		
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?				
							<b>Total Removed</b>		0	
							<b>Disposal Facility:</b>			



<b>Equipment ID:</b> FLR01-S @ 4'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> East facing (Separator flowline riser) n			

<b>Equipment ID:</b> FLR01-W @ 4'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> South facing (Wellhead flowline riser)			

**TABLE 1**  
**SOIL SAMPLE LOCATIONS**  
**NOBLE ENERGY, INC. (100322) - FEURSTEIN I28-63-1HN**

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude <sup>1</sup>	Longitude	PDOP
FLR01-S@4'	05/06/24	0.0	No Staining	No Odor	Lab	40.454243	-104.789468	1.3
FLR01-W@4'	05/06/24	0.1	No Staining	No Odor	Lab	40.456717	-104.791458	0.8

Notes:

PID = Photoionization detector

ppm = parts per million

PDOP = Position dilution of precision

1.) Latitude and longitude coordinates will be provided in decimal degrees with an accuracy and precision of 6 decimals of a degree using the North American Datum ("NAD") of 1983

TABLE 2  
SOIL ANALYTICAL DATA  
NOBLE ENERGY, INC. (100322) - FEURSTEIN I28-63-1HN

Soil Sample ID	Date	<sup>1</sup> Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL <sup>2</sup>		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL <sup>2,3</sup>		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FLR01-S@4'	05/06/24	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50	<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
FLR01-W@4'	05/06/24	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50	<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

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
SSR <sup>1,2</sup>		6 - 8.3	<6	<4mmhos/cm	2
FLR01-S@4'	05/06/24	8.56	0.0429	0.185	<2.00
FLR01-W@4'	05/06/24	8.69	0.112	0.166	<2.00

Sample ID	Date Sampled	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)
Residential SSL <sup>1,2</sup>		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater SSL <sup>1,2,3</sup>		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FLR01-S@4'	05/06/24	4.45	93.9	<0.200	<0.30	6.22	6.39	8.14	<0.260	0.0323	18.6
FLR01-W@4'	05/06/24	5.13	250	0.252	<0.30	10.8	7.76	9.99	<0.260	0.0426	20.10

Notes:

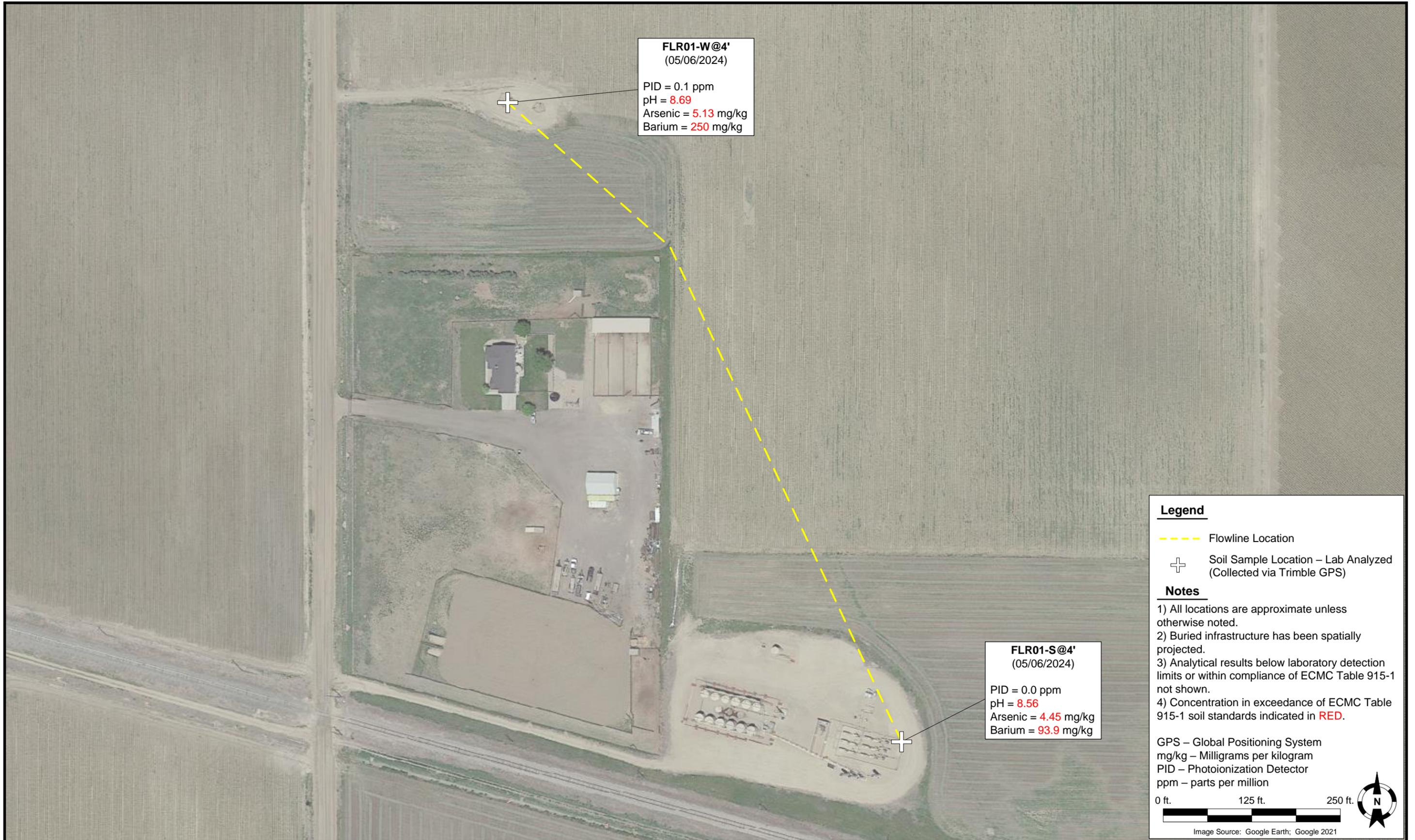
- Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) and Soil Suitability for Reclamation (SSR) standards referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.
- SSLs are applicable if a pathway for communication with groundwater is present.

Definitions:

ECMC = Colorado Energy and Carbon Management Commission  
 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  
 SAR = Sodium Adsorption Ratio  
 EC = Electrical Conductivity  
 mmhos/cm = Millimhos per centimeter  
 mg/L = Milligrams per liter  
 < = Analytical result is less than the indicated laboratory reporting limit

1,2,4 - TMB = 1,2,4 Trimethylbenzene  
 1,3,5 - TMB = 1,3,5 Trimethylbenzene  
 Benz(a) = Benzanthracene  
 Benzo(b) = Benzofluoranthene  
 Benzo(k) = Benzofluoranthene  
 Benzo(a) = Benzopyrene  
 A,H = Dibenzoanthracene  
 1,2,3-CD = Indenopyrene  
 1-M = 1-methylnaphthalene  
 2-M = 2-methylnaphthalene  
 NA = Not analyzed

Highlighted results are equal to or exceed the ECMC Table 915-1 standard



**FLR01-W@4'**  
(05/06/2024)  
PID = 0.1 ppm  
pH = 8.69  
Arsenic = 5.13 mg/kg  
Barium = 250 mg/kg

**FLR01-S@4'**  
(05/06/2024)  
PID = 0.0 ppm  
pH = 8.56  
Arsenic = 4.45 mg/kg  
Barium = 93.9 mg/kg

**Legend**

- - - - Flowline Location
- + Soil Sample Location – Lab Analyzed (Collected via Trimble GPS)

**Notes**

- 1) All locations are approximate unless otherwise noted.
- 2) Buried infrastructure has been spatially projected.
- 3) Analytical results below laboratory detection limits or within compliance of ECMC Table 915-1 not shown.
- 4) Concentration in exceedance of ECMC Table 915-1 soil standards indicated in **RED**.

GPS – Global Positioning System  
mg/kg – Milligrams per kilogram  
PID – Photoionization Detector  
ppm – parts per million

0 ft.      125 ft.      250 ft.



Image Source: Google Earth; Google 2021

DATE: 06/14/2024

DESIGNED BY: JW

DRAWN BY: MW



Tasman, Inc.  
6855 W 119<sup>th</sup> Avenue  
Broomfield, CO 80020

**Noble Energy, Inc. (100322) – DJ Basin**  
**Fuerstein I28-63-1HN**  
NWSW, Section 28, Township 6 North, Range 66 West  
Weld County, Colorado

Flowline Closure & Soil  
Analytical Results Map  
(05/06/2024)

FIGURE  
1