

# 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
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Site Name & COGCC Facility Number: Shelton RG26-08	Date: 8/14/2023	Remediation Project #: 29038
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Associated Wells:	Age of Site:	Number of Photos Attached: 12
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Starting point: (GPS coordinates and descriptions)  
40.285012, -104.623523

End point: (GPS coordinates and descriptions)  
40.287144, -104.627011

USCS Soil Type: SW	Estimated Depth to Groundwater: >3.5 ft
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
Some staining observed at wellhead, impact appears to be surficial.

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

Flowline type	Oil / Gas / Water			
Depth	3.5 ft			
Age				
Length	1246 ft			
Construction Material	Steel			
Were flowlines pulled?	Yes			
Visual Integrity of lines	Good			
Visual impacts if trenched	None			
PID Readings if trenched	0.0 - 3.7			
Sample taken? Location/Sample ID#	Yes, see below			
Photo Number(s)	2 - 11			

Other observations regarding on location flowlines:  
Samples were taken at the wellhead (FL01-A@3') and also along the flowline path (FL01-C@4' - FL01- K@3').  
B-point (at separator) was sampled during facility decommissioning.

### Summary

Was impacted soil identified? <b>No</b>	
Total number of samples field screened: 10	Total number of samples collected: 10
Highest PID Reading: 3.7	Total number of samples submitted to lab for analysis: 1
<b>If more than 10 cubic yards of impacted soil were observed:</b>	
Vertical extent:	Estimated spill volume:
Lateral extent:	Volume of soil removed:
Is additional investigation required?	
Was groundwater encountered during the investigation? <b>No</b>	
Measured depth to groundwater:	Was remedial groundwater removal conducted?
Date Groundwater was encountered:	Commencement date of removal:
Sheen on groundwater?	Volume of groundwater removed prior to sampling:
Free product observed?	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:	

### Photographic Log



<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> Site photo - facility Facing NE			

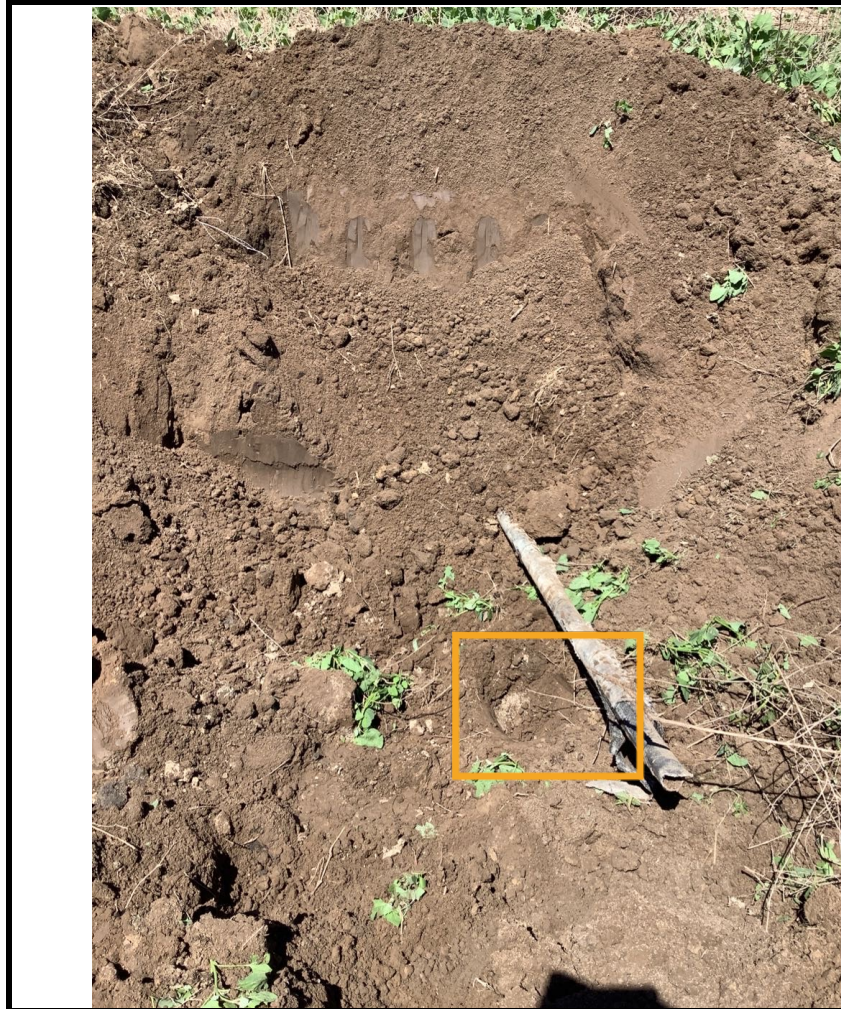
<b>Equipment ID:</b> FL01-C@4'		<b>Equipment Type:</b> Flowline	
<b>Material:</b> Steel	<b>Volume:</b>	<b>Contents:</b> Oil/Gas/Water	
<b>Notes/Conditions:</b>			

### Photographic Log



<b>Equipment ID:</b> FL01-D@4'		<b>Equipment Type:</b>		<b>Equipment ID:</b> FL01-E@3.5'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> Slight direction change				<b>Notes/Conditions:</b>			

### Photographic Log



<b>Equipment ID:</b> FL01-F@4'		<b>Equipment Type:</b>		<b>Equipment ID:</b> FL01-G@4'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			

### Photographic Log



<b>Equipment ID:</b> FL01-H@1'		<b>Equipment Type:</b>		<b>Equipment ID:</b> FL01-I@2.5'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			

## Photographic Log



<b>Equipment ID:</b> FL01-J@2.5'		<b>Equipment Type:</b>		<b>Equipment ID:</b> FL01-K@3'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b>				<b>Notes/Conditions:</b>			

Photographic Log



<b>Equipment ID:</b> FL01-A@3'		<b>Equipment Type:</b>		<b>Equipment ID:</b>		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> Some staining present in excavation				<b>Notes/Conditions:</b> Site photo, from A point Facing W  Arrow shows direction of flowline path			

**TABLE 1**  
**SOIL SAMPLE LOCATIONS**  
**NOBLE ENERGY, INC. - SHELTON RG 26-08**

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude <sup>1</sup>	Longitude	PDOP
FL01-A@3'	08/14/23	3.7	HC staining	No Odor	Lab	40.285013	-104.623541	1.2
FL01-C@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286707	-104.626268	1.6
FL01-D@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286866	-104.626523	1.1
FL01-E@3.5'	08/14/23	0.0	No staining	No Odor	Grab	40.287141	-104.626862	1.2
FL01-F@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286463	-104.625878	0.9
FL01-G@4'	08/14/23	0.0	No staining	No Odor	Grab	40.286105	-104.625349	0.8
FL01-H@1'	08/14/23	0.0	No staining	No Odor	Grab	40.285711	-104.624694	0.9
FL01-I@2.5'	08/14/23	0.0	No staining	No Odor	Grab	40.285479	-104.624325	1.0
FL01-J@2.5'	08/14/23	0.0	No staining	No Odor	Grab	40.285320	-104.624055	1.1
FL01-K@3'	08/14/23	0.0	No staining	No Odor	Grab	40.285144	-104.623736	1.3

Notes:

PID = Photoionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

1.) Latitude and longitude coordinates will be provided in decimal degrees with an accuracy and precision of 5 decimals of a degree using the North American Datum ("NAD") of 1983

**TABLE 2  
SOIL ANALYTICAL DATA  
NOBLE ENERGY, INC. - SHELTON RG 26-08**

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)
<b>Residential SSL<sup>2</sup></b>		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
<b>Protection of Groundwater SSL<sup>2,3</sup></b>		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
FL01-A@3'	08/14/23	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<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)
<b>Residential SSL<sup>2</sup></b>		6 - 8.3	<6	<4mmhos/cm	2
FL01-A@3'	08/14/23	7.88	4.64	1.58	0.666

Soil Sample ID	Date	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)
<b>Residential SSL<sup>(1,2)</sup></b>		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
<b>Protection of Groundwater SSL<sup>(1,2,3)</sup></b>		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FL01-A@3'	08/14/23	1.11	81.9	0.491	<0.30	3.20	38.5	2.07	<0.260	0.0497	18.9

Notes:

- Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) 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 = 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

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

1,2,4 - TMB = 1,2,4 Trimethylbenzene

1,3,5 - TMB = 1,3,5 Trimethylbenzene

Benzo(a) = Benzo(a)anthracene

Benzo(b) = Benzo(b)fluoranthene

Benzo(k) = Benzo(k)fluoranthene

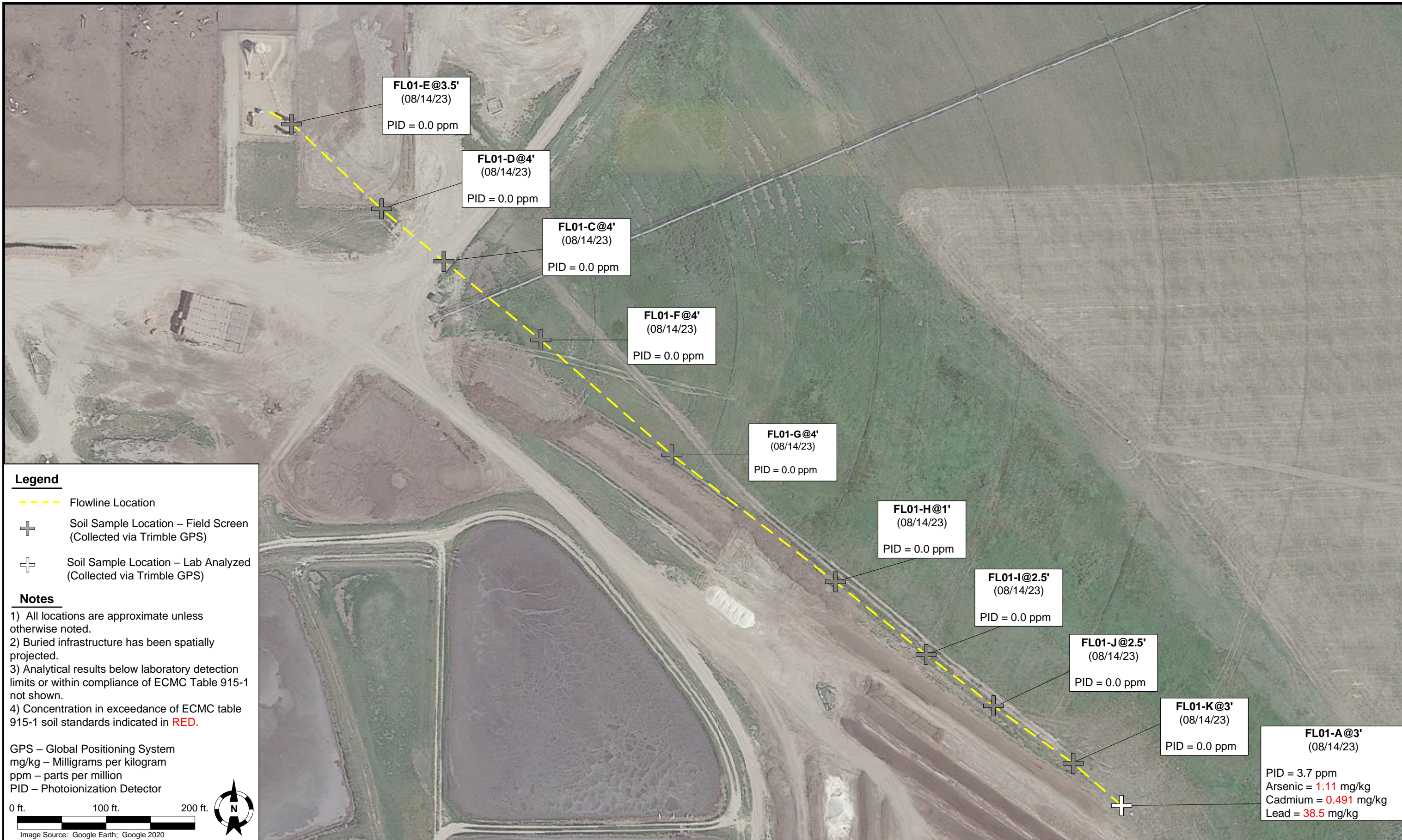
Benzo(a) = Benzo(a)pyrene

A,H = Dibenzo(a,h)anthracene

1,2,3-CD = Indeno(1,2,3-cd)pyrene

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene



DATE: 09/01/2023

DESIGNED BY: JW

DRAWN BY: EH

**TASMAN**  
 GEOSCIENCES

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

**Noble Energy, Inc. – DJ Basin**  
**Shelton RG 26-08**  
 SENE, Section 26, Township 4 North, Range 65 West  
 Weld County, Colorado

Flowline Closure & Soil  
 Analytical Results Map  
 (08/14/2023)

FIGURE  
 1