



<b>SITE NAME:</b> Sater CC18-18							<b>DATE:</b> 4/8/2024	<b>REM. PROJECT #:</b> 31874	<b>WEATHER:</b> CLEAR, 40S		
<b>SITE DIRECTIONS:</b> CR 46//61 0.5MI E 0.3SE INTO							<b>CLIENT:</b> Noble				
<b>LEGALS AND LAT/LONG:</b> 40.316668, -104.475266							<b>TASMAN PERSONNEL:</b> MW, KS				
<b>SOIL TYPES:</b> Well Graded Sand - SW							<b>SURFACE GRADIENT:</b> South				
<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)		2		
4/8/2024 11:39	AST01@0.5'	0.1	HC Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel		1		
4/8/2024 11:48	AST02@0.5'	0.1	No Staining	No Odor	Yes	Lab	Separator		2		
4/9/2024 12:58	SEP01-FL@3'	1.2	No Staining	No Odor	Yes	Lab	Emission Control Device (ECD)				
4/9/2024 13:00	SEP01-DL@3'	1.3	No Staining	No Odor	Yes	Lab	Dump Line				
4/9/2024 13:10	SEP02-FL@3'	0.8	No Staining	No Odor	Yes	Lab	Wellhead				
4/9/2024 13:12	SEP02-DL@3'	1.2	No Staining	No Odor	Yes	Lab	Flowline				
4/8/2024 13:40	FS01@4'	0.6	No Staining	No Odor	Yes	Lab	Other:				
4/8/2024 13:31	SS01@3'	0.2	No Staining	No Odor	Yes	On-Hold	<b>Soil Loads Removed</b>				
4/8/2024 13:34	SS02@3'	0.6	No Staining	No Odor	Yes	Lab	<b>IMPACTED SOIL IDENTIFIED?</b>				
4/8/2024 13:35	SS03@3'	0.3	No Staining	No Odor	Yes	On-Hold	<b>ESTIMATED VOLUME OF IMPACTS:</b>				
4/8/2024 13:37	SS04@3'	0.1	No Staining	No Odor	Yes	On-Hold	<b>Date</b>		<b>Number</b>		<b>CY</b>
4/8/2024 13:10	MH01@0.5'	0.0	No Staining	No Odor	Yes	Grab					
4/8/2024 13:17	MH02@0.5'	0.1	No Staining	No Odor	Yes	Grab					
4/8/2024 13:08	FLARE01@0.5'	0.1	No Staining	No Odor	Yes	Grab					
4/9/2024 13:21	BG01 @ 0.5'	0.4	No Staining	No Odor	Yes	Lab					
4/9/2024 13:23	BG01 @ 3'	0.5	No Staining	No Odor	Yes	Lab	<b>Total Removed</b>		0		0
4/9/2024 13:25	BG01 @ 4'	0.7	No Staining	No Odor	Yes	Lab	<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>				



### GENERAL OBSERVATION FORM

Client: Noble

Site Area/AOC: Sater CC 18-17D TB

Date: 4/8/2024

Task/Location Description: Decommissioning soil sampling



Daily Forecast/Weather: Sunny, 40s

Personnel: MW, KS

Description of Activities:

Time	Description
09:30	Arrived on site began JSA
10:56	Completed JSA reviewed with crew
10:57	Waited for crew activities
14:05	Completed sampling activities
14:39	Departed site
	SEP01-FL, SEP01-DL, SEP02-FL, & SEP-02-DL SAMPLED WITH FLOWLINE ON 4/8/24 DUE TO ASPESTOS CONCERN
	SEP01-FL IS FL01-B for Sater CC18-18 FL
	PROXIMITY OF BG01 TO FLOWLINES IS DUE TO MULTIPLE OTHER GAS AND WATER LINES IN AREA

**Photographic Log**

					
<b>Equipment ID:</b> AST01@0.5'		<b>Equipment Type:</b>		<b>Equipment ID:</b> AST02@0.5'	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>
<b>Notes/Conditions:</b> N facing			<b>Notes/Conditions:</b> N facing		

Photographic Log



<b>Equipment ID:</b> FLARE01 @0.5'		<b>Equipment Type:</b>		<b>Equipment ID:</b> MH01 @0.5'		<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> S Facing				<b>Notes/Conditions:</b> E facing			

Photographic Log



<b>Equipment ID:</b> MH02@0.5'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> N Facing			

<b>Equipment ID:</b> SS01@3'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> N Facing			

Photographic Log



<b>Equipment ID:</b> SS02@3'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> E facing			

<b>Equipment ID:</b> SS03@3'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> S facing			



### Photographic Log



<b>Equipment ID:</b> SS04@3'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> W facing			

<b>Equipment ID:</b> FS01@4'		<b>Equipment Type:</b>	
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>	
<b>Notes/Conditions:</b> E facing			

### Photographic Log

					
<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

					
<p><b>Material:</b></p>	<p><b>Volume:</b></p>	<p><b>Contents:</b></p>	<p><b>Material:</b></p>	<p><b>Volume:</b></p>	<p><b>Contents:</b></p>
<p><b>Notes/Conditions:</b></p>			<p><b>Notes/Conditions:</b></p>		

**Photographic Log**


<b>Equipment ID:</b> BG01		<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>				<b>Notes/Conditions:</b>			

**TABLE 1**  
**SOIL SAMPLE LOCATIONS**  
**NOBLE ENERGY, INC. (100322) - SATER CC18-18**

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude <sup>1</sup>	Longitude	PDOP
AST01@0.5'	04/08/24	0.1	HC Staining	No Odor	Lab	40.316622	-104.474874	NC
AST02@0.5'	04/08/24	0.1	No Staining	No Odor	Lab	40.316607	-104.474824	NC
FLARE01@0.5'	04/08/24	0.1	No Staining	No Odor	Grab	40.316661	-104.475341	NC
FS01@4'	04/08/24	0.6	No Staining	No Odor	Lab	40.316614	-104.474982	NC
MH01@0.5'	04/08/24	0.0	No Staining	No Odor	Grab	40.316707	-104.475313	NC
MH02@0.5'	04/08/24	0.1	No Staining	No Odor	Grab	40.316577	-104.475233	NC
SS01@3'	04/08/24	0.2	No Staining	No Odor	Grab	40.316627	-104.474974	NC
SS02@3'	04/08/24	0.6	No Staining	No Odor	Lab	40.316603	-104.474929	NC
SS03@3'	04/08/24	0.3	No Staining	No Odor	Grab	40.316595	-104.474976	NC
SS04@3'	04/08/24	0.1	No Staining	No Odor	Grab	40.316618	-104.475011	NC
SEP01-DL@3'	04/09/24	1.3	No Staining	No Odor	Lab	40.316679	-104.475244	1.0
SEP01-FL@3'	04/09/24	1.2	No Staining	No Odor	Lab	40.316670	-104.475275	1.0
SEP02-DL@3'	04/09/24	1.2	No Staining	No Odor	Lab	40.316627	-104.475223	0.9
SEP02-FL@3'	04/09/24	0.8	No Staining	No Odor	Lab	40.316621	-104.475271	0.9
BG01@0.5'	04/09/24	0.4	No Staining	No Odor	Lab	40.316001	-104.480058	0.9
BG01@3'	04/09/24	0.5	No Staining	No Odor	Lab	40.316001	-104.480058	0.9
BG01@4'	04/09/24	0.7	No Staining	No Odor	Lab	40.316001	-104.480058	0.9

Notes:

PID = Photoionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

NC = Not Collected

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) - SATER CC18-18

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>1,2</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>1,2,3</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
AST01@0.5'	04/08/24	<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
AST02@0.5'	04/08/24	<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
FS01@4'	04/08/24	<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
SS02@3'	04/08/24	<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
SEP01-DL@3'	04/09/24	<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
SEP01-FL@3'	04/09/24	<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
SEP02-DL@3'	04/09/24	<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
SEP02-FL@3'	04/09/24	<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)
SSR <sup>1,2</sup>		6 - 8.3	<6	<4mmhos/cm	2
AST01@0.5'	04/08/24	7.61	0.0148	0.0270	<2.00
AST02@0.5'	04/08/24	8.77	0.112	0.134	<2.00
FS01@4'	04/08/24	8.85	0.0997	0.0970	<2.00
SS02@3'	04/08/24	8.05	0.0285	0.0650	<2.00
SEP01-DL@3'	04/09/24	8.16	0.0407	0.0549	<2.00
SEP01-FL@3'	04/09/24	8.19	0.0635	0.108	<2.00
SEP02-DL@3'	04/09/24	8.40	0.147	0.252	<2.00
SEP02-FL@3'	04/09/24	8.60	0.0250	0.107	<2.00
BG01@0.5'	04/09/24	7.65	NA	NA	NA
BG01@3'	04/09/24	8.37	NA	NA	NA
BG01@4'	04/09/24	8.71	NA	NA	NA
<b>Highest Background</b>		<b>8.71</b>	-	-	-

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)
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
AST01@0.5'	04/08/24	2.17	79.9	0.358	<0.30	5.48	10.6	4.72	<0.260	0.0559	18.0
AST02@0.5'	04/08/24	2.38	45.9	<0.200	<0.30	4.06	6.71	4.11	<0.260	0.0376	15.0
FS01@4'	04/08/24	1.82	56.7	<0.200	<0.30	3.98	5.01	3.87	<0.260	0.0408	14.7
SS02@3'	04/08/24	2.09	67.2	0.272	<0.30	5.45	7.19	4.31	<0.234	0.0481	17.5
SEP01-DL@3'	04/09/24	1.46	55.0	<0.179	<0.30	3.80	3.72	2.86	<0.232	0.0240	16.7
SEP01-FL@3'	04/09/24	1.61	63.2	0.200	<0.30	5.82	5.05	3.54	<0.260	0.0278	23.1
SEP02-DL@3'	04/09/24	1.66	61.0	<0.200	<0.30	5.54	4.95	3.48	<0.260	0.0253	22.6
SEP02-FL@3'	04/09/24	1.74	68.1	0.220	<0.30	6.88	6.01	3.81	<0.260	0.0310	26.0
BG01@0.5'	04/09/24	1.64	78.5	0.205	<0.30	7.95	6.52	3.94	<0.260	0.0290	26.7
BG01@3'	04/09/24	1.67	62.1	<0.200	<0.30	4.92	4.51	3.47	<0.260	0.0349	22.3
BG01@4'	04/09/24	1.71	59.7	<0.181	<0.30	5.04	4.56	3.18	<0.236	0.0224	19.5
<b>Mean Background Concentration</b>		<b>1.67</b>	-	-	-	-	-	-	-	-	-
<b>Mean Background x1.25</b>		<b>2.09</b>	-	-	-	-	-	-	-	-	-
<b>Highest Background</b>		<b>1.71</b>	-	-	-	-	-	-	-	-	-
<b>Highest Background x1.25</b>		<b>2.14</b>	-	-	-	-	-	-	-	-	-

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 = 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

Benz(a) = Benzo(a)anthracene

Benzo(b) = Benzo(b)fluoranthene

Benzo(k) = Benzo(k)fluoranthene

Benzo(a) = Benzo(a)pyrene

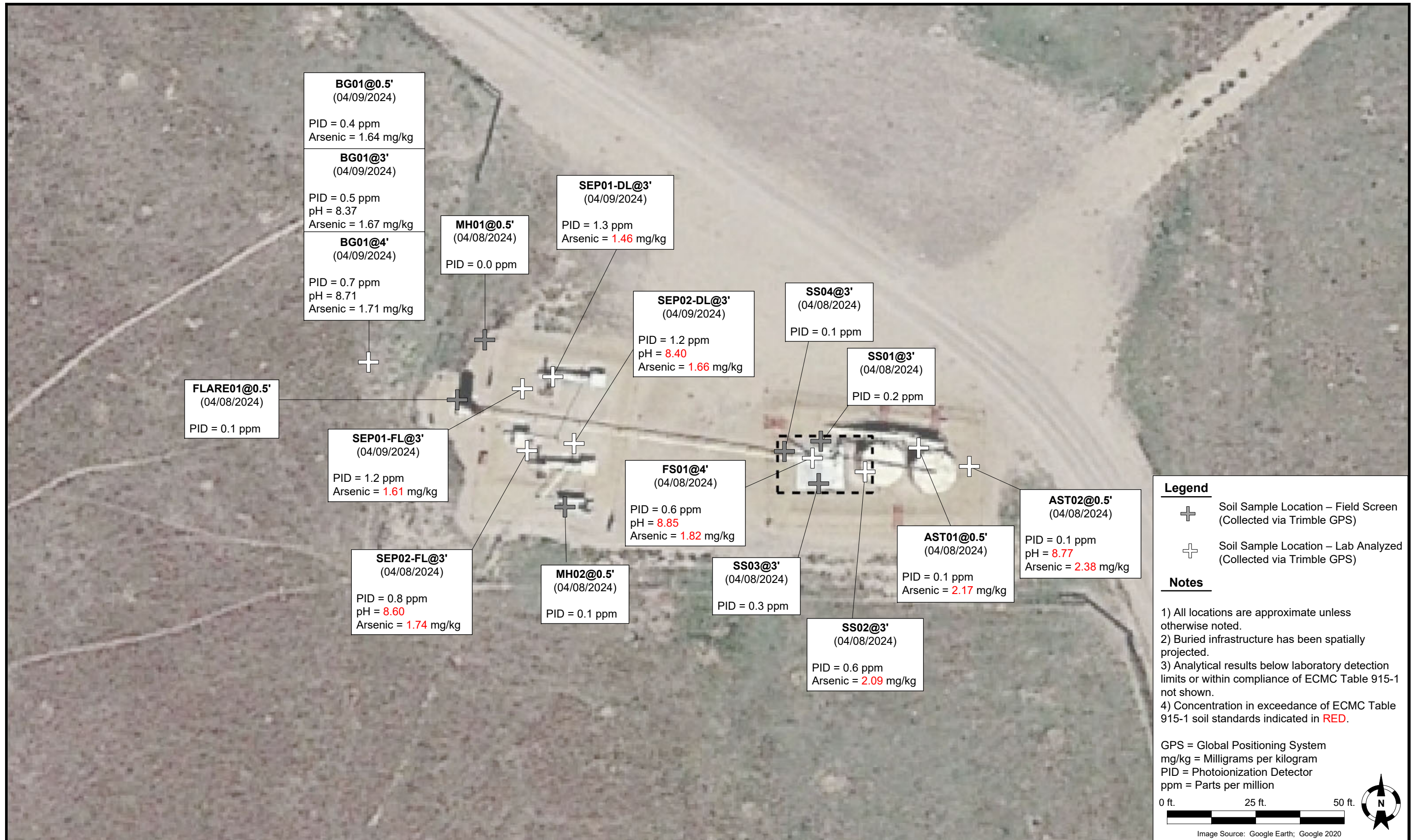
A,H = Dibenzo(a,h)anthracene

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

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene

NA = Not analyzed



DATE: 06/05/2024

DESIGNED BY: JW

DRAWN BY: PK



**TASMAN**  
GEOSCIENCES

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

**Noble Energy, Inc. (100322) – DJ Basin**  
**Sater CC18-18**  
 NENE, Section 18, Township 4 North, Range 63 West  
 Weld County, Colorado

Tank Battery Closure & Soil  
 Analytical Results Map  
 (04/08/2024 and 04/09/2024)

FIGURE  
1