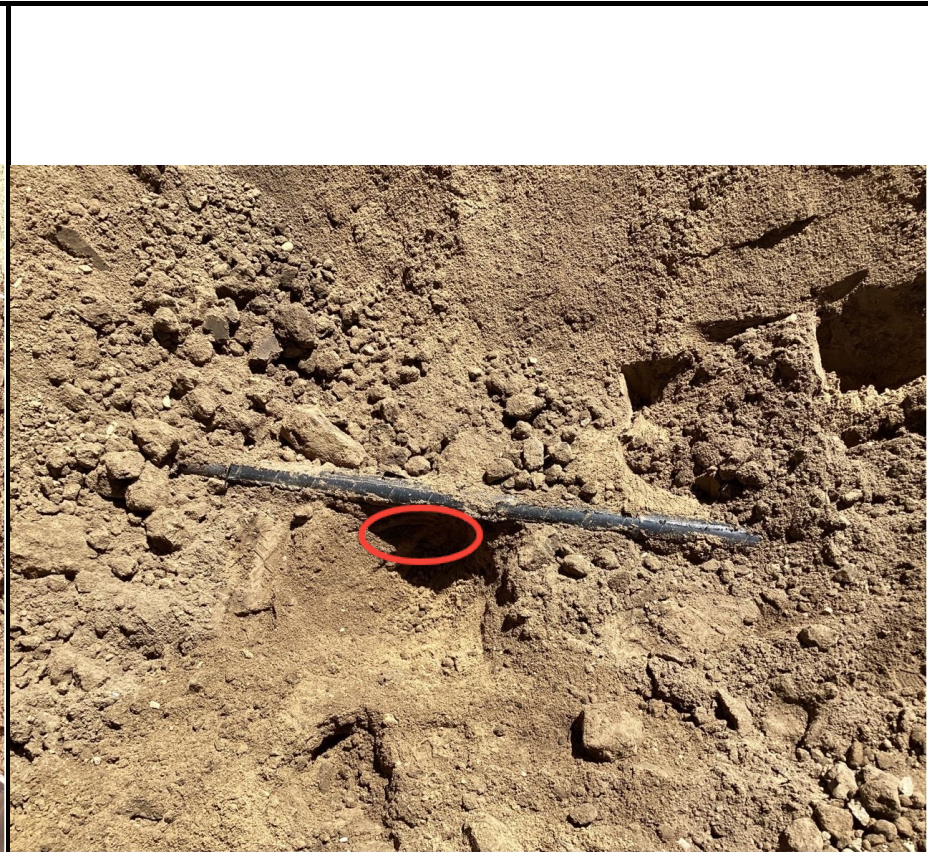
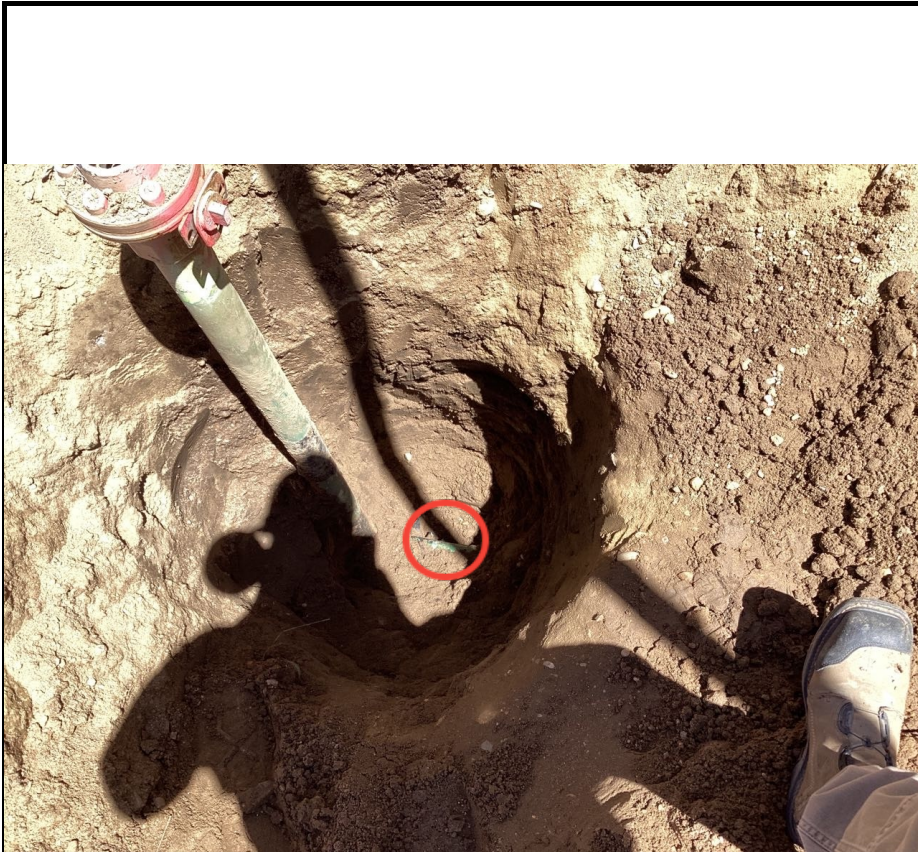


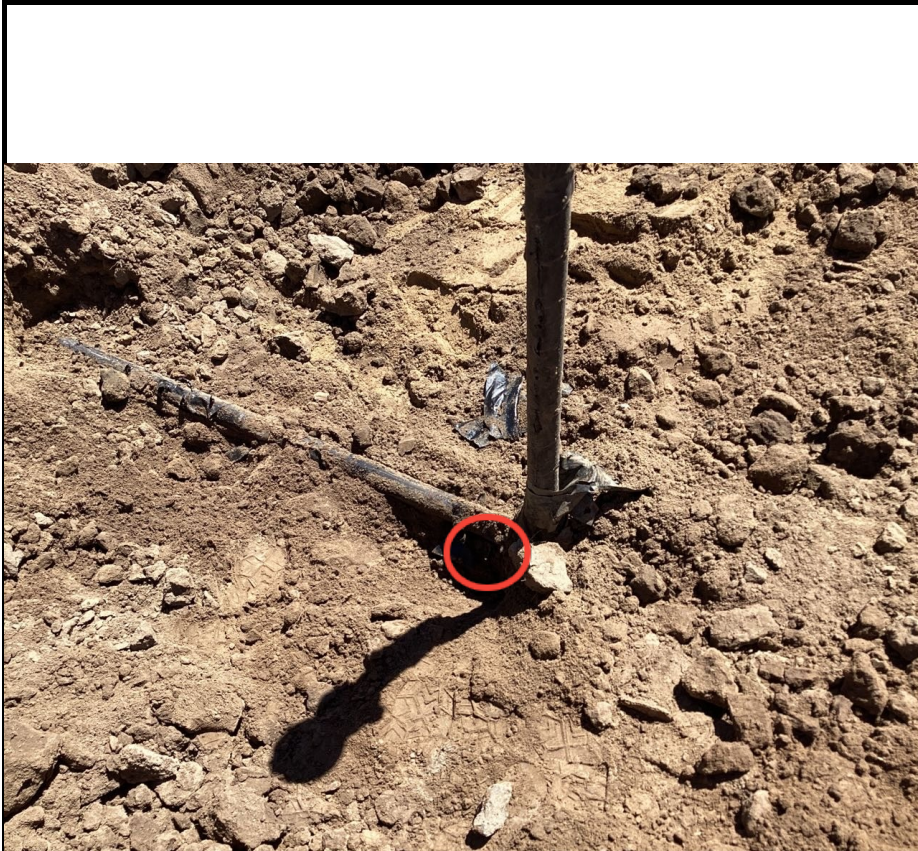


SITE NAME: UPV 13-1014 (FKA UPRC13-1014)							DATE: 6/5/2024	REM. PROJECT #: 32589	WEATHER: 80s sunny		
SITE DIRECTIONS: CR46 & CR61, 0.5 S, W into							CLIENT: Noble				
LEGALS AND LAT/LONG: 40.310479, -104.49663							TASMAN PERSONNEL: G Semenza				
SOIL TYPES: Well Graded Sand - SW							SURFACE GRADIENT: Northwest				
SOIL SAMPLING							FACILITY INFRASTRUCTURE				
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT	Quantity	Photo?		
							Above Ground Storage Tank (AST)				
6/5/2024 13:30	FL01R-S@4	0.0	No Staining	No Odor	Yes	Lab	Buried or Partially Buried Vessel				
6/5/2024 11:54	FL01-01@4	0.0	No Staining	No Odor	Yes	Lab	Separator				
6/5/2024 11:20	FL01R-W@4'	1250	No Staining	HC Odor	Yes	Lab	Emission Control Device (ECD)				
6/5/2024 12:03	BKG01@4'	0.0	No Staining	No Odor	Yes	Lab	Dump Line				
							Wellhead				
							Flowline				
							Other:				
							Soil Loads Removed				
							IMPACTED SOIL IDENTIFIED?				
							ESTIMATED VOLUME OF IMPACTS:				
							Date	Number	CY		
							Total Removed	0	0		
							Disposal Facility:				
							Groundwater Recovery				
							DATE GW ENCOUNTERED:	DEPTH:			
							GROUNDWATER IN CONTACT WITH IMPACTED SOIL?				
							LNAPL OR SHEEN OBSERVED ON GW?				
GROUNDWATER SAMPLING							Date	BBLs			
Date/Time	Groundwater Sample ID	Depth Collected	Turbid?	Sheen?	Odor?	Photo?					
							Total Removed	0			
							Disposal Facility:				



Equipment ID: FL01R-S		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			

Equipment ID: FL01-01		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			



Equipment ID: FL01R-W		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			

Equipment ID: BKG01		Equipment Type:	
Material:	Volume:	Contents:	
Notes/Conditions:			

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE - 100322
UPV 13-1014, WELD COUNTY, COLORADO
REM # 32589

Sample ID	Sample Date	Depth (ft.)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
FL01R-W@4'	6/5/2024	4	40.310469	-104.496638	0.8	1,250
FL01R-S@4'	6/5/2024	4	40.310728	-104.496533	0.8	0.0
FL01-01@4'	6/5/2024	4	40.310620	-104.496569	0.9	0.0
BKG01@4'	6/5/2024	4	40.310465	-104.496427	0.7	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

ft. = Feet

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE - 100322
UPV 13-1014, WELD COUNTY, COLORADO
REM # 32589

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**		
FL01R-W@4'	6/5/2024	4	<0.20	3.3	4.4	55	28	15	2.2	5,900	1500	4000	400
FL01R-S@4'	6/5/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
FL01-01@4'	6/5/2024	4	<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. Pink & 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
- TPH = Total Petroleum Hydrocarbons
DRO = Diesel Range Organics
GRO = Gasoline Range Organics
ORO = Oil Range Organics
ft. = Feet
mg/kg = Milligrams per kilogram
< = Analytical Result is less than the indicated laboratory reporting limit

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE - 100322
UPV 13-1014, WELD COUNTY, COLORADO
REM # 32589

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
FL01R-W@4'	6/5/2024	4	0.0136	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00642	0.0391	<0.00500	<0.00500	0.265	0.486
FL01R-S@4'	6/5/2024	4	<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
FL01-01@4'	6/5/2024	4	<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. Pink & 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

ft. = Feet

mg/kg = Milligrams per kilogram

< = Analytical Result is less than the indicated laboratory reporting limit

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE - 100322
UPV 13-1014, WELD COUNTY, COLORADO
REM # 32589

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
FL01R-W@4'	6/5/2024	4	8.31	0.101	0.311	<2.00
FL01R-S@4'	6/5/2024	4	8.14	0.0291	0.203	<2.00
FL01-01@4'	6/5/2024	4	8.90	0.103	0.0974	<2.00
BKG01@4'	6/5/2024	4	9.37	0.0619	0.0971	NA
Maximum Background Concentration			9.37	-	-	-

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

2. Brown highlighted soil analytical values indicate a regulatory exceedance, but below background concentration.

NA - Not analyzed

ft. = Feet

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

mmhos / cm = Millmhos per centimeter

mg/L = Milligrams per liter

< = Analytical result is less than the indicated laboratory reporting limit

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE - 100322
UPV 13-1014, WELD COUNTY, COLORADO
REM # 32589

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
FL01R-W@4'	6/5/2024	4	0.499	49.2	<0.200	<0.30	3.34	5.01	2.88	<0.260	<0.0200	6.35
FL01R-S@4'	6/5/2024	4	0.550	45.6	<0.200	<0.30	3.74	3.97	3.09	<0.260	<0.0200	6.43
FL01-01@4'	6/5/2024	4	0.423	25.2	<0.200	<0.30	1.78	2.31	1.90	<0.260	<0.0200	3.68
BKG01@4'	6/5/2024	4	0.524	25.2	<0.200	<0.30	1.80	2.22	1.93	<0.260	<0.0200	3.74
Maximum Background Concentration			0.524	-	-	-	-	-	-	-	-	-
Maximum Background Concentration X 1.25			0.655	-	-	-	-	-	-	-	-	-

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

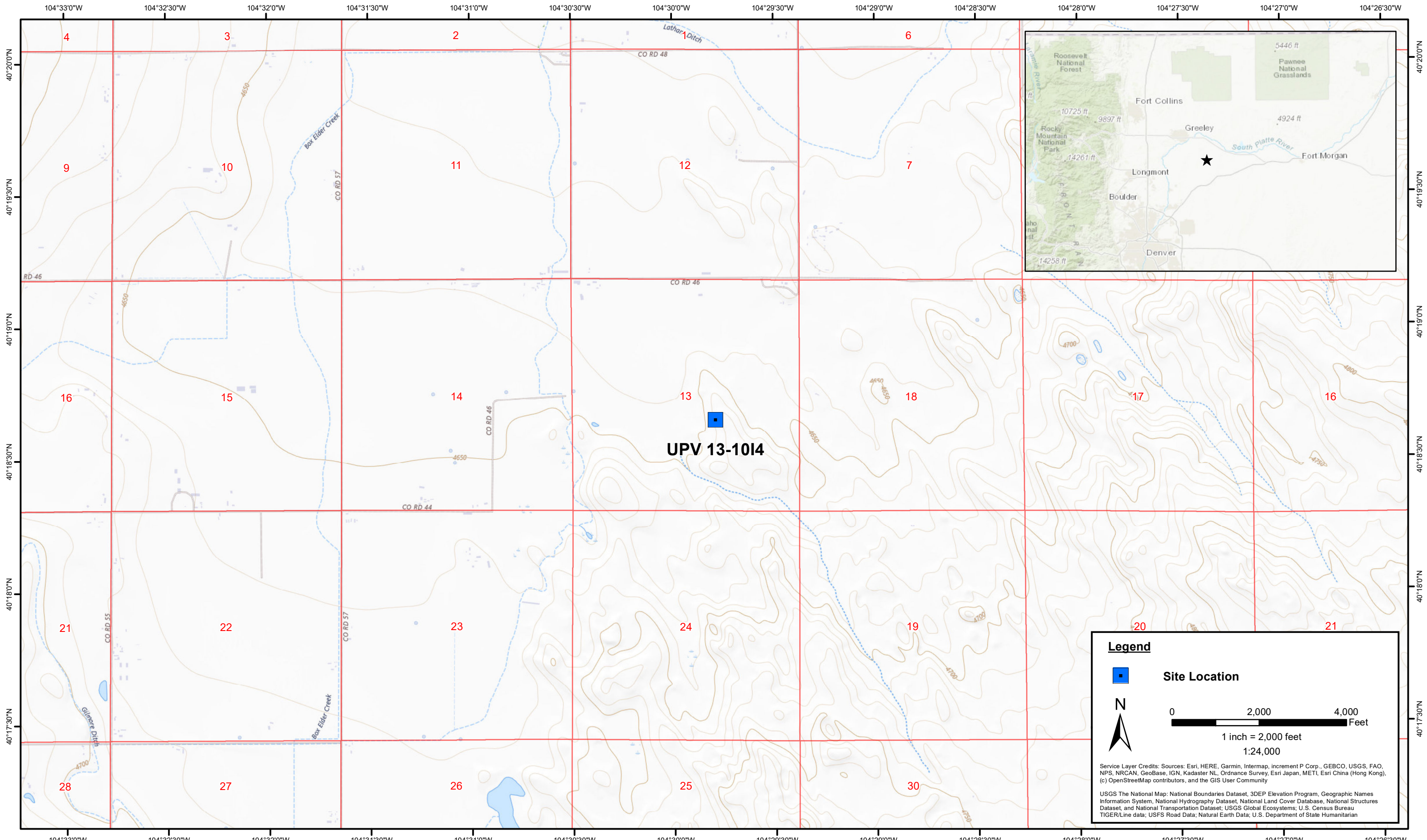
2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

ft. = Feet

mg/kg = Milligrams per kilogram

< = Analytical Result is less than the indicated laboratory reporting limit



DATE: June 2024
 DESIGNED BY: B. Nelson
 DRAWN BY: J. Clonts

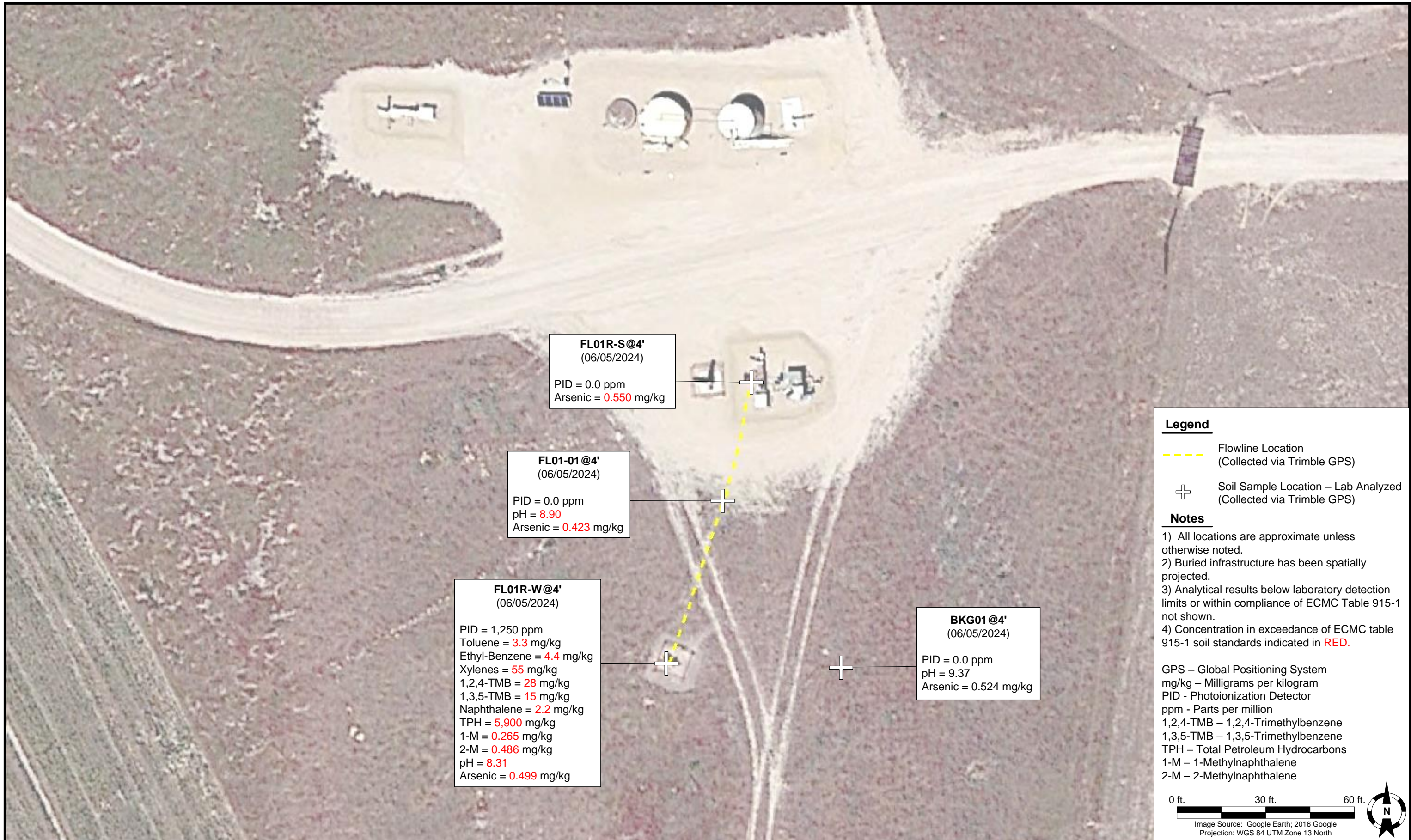


Tasman, Inc.
 6855 W. 119th Ave
 Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
UPV 13-1014
 NWSE, Section 13, Township 4 North, Range 64 West
 Weld County, Colorado

Site Location Map

Figure
1



FL01R-S@4'
(06/05/2024)

PID = 0.0 ppm
Arsenic = **0.550** mg/kg

FL01-01@4'
(06/05/2024)

PID = 0.0 ppm
pH = **8.90**
Arsenic = **0.423** mg/kg

FL01R-W@4'
(06/05/2024)

PID = 1,250 ppm
Toluene = **3.3** mg/kg
Ethyl-Benzene = **4.4** mg/kg
Xylenes = **55** mg/kg
1,2,4-TMB = **28** mg/kg
1,3,5-TMB = **15** mg/kg
Naphthalene = **2.2** mg/kg
TPH = **5,900** mg/kg
1-M = **0.265** mg/kg
2-M = **0.486** mg/kg
pH = **8.31**
Arsenic = **0.499** mg/kg

BKG01@4'
(06/05/2024)

PID = 0.0 ppm
pH = 9.37
Arsenic = 0.524 mg/kg

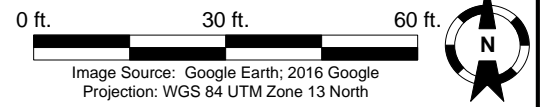
Legend

- Flowline Location
(Collected via Trimble GPS)
- + 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
1,2,4-TMB – 1,2,4-Trimethylbenzene
1,3,5-TMB – 1,3,5-Trimethylbenzene
TPH – Total Petroleum Hydrocarbons
1-M – 1-Methylnaphthalene
2-M – 2-Methylnaphthalene



DATE:	06/21/2024
DESIGNED BY:	C. Hamlin
DRAWN BY:	E. Hossink

Tasman, Inc.
6855 W. 119th Ave.
Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
UPV 13-1014 Flowline
NWSE, Section 13, Township 4 North, Range 64 West
Weld County, Colorado

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

FIGURE
2

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 20, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - UPV 13-10I4

Work Order #2406054

Enclosed are the results of analyses for samples received by Summit Scientific on 06/05/24 18:03. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Natalie Tessier". The signature is written in a cursive, flowing style.

Natalie Tessier For Paul Shrewsbury

President



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014

Project Number: UWRWE-A3640-ABN

Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01R-W@4'	2406054-01	Soil	06/05/24 11:20	06/05/24 18:03
FL01R-S@4'	2406054-02	Soil	06/05/24 13:30	06/05/24 18:03
FL01-01@4'	2406054-03	Soil	06/05/24 11:54	06/05/24 18:03
BKG01@4'	2406054-04	Soil	06/05/24 12:03	06/05/24 18:03

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Client: Noble / Tasman		Project Manager: Jake Whritenour		Company: Chevron	
Address: 6855 W 119th Ave		E-Mail: jwhritenour@tasman-geo.com		Project Name/Location: UPV 13-1014	
City/State/Zip: Broomfield / CO / 80020				AFE#: UWRWE-A3640-ABN	
Phone: 303-487-1228		Project Name: UPV 13-1014		PO/Billing Codes:	
Sampler Name: Gabe Semenza		Project Number:		Contact: Dan Peterson ^{as} Wade Firestein	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR		Boron - HWS
1	FLOIR-Wey'	6/5/24	1120	3			X			X								
2	FLOIR-Se	↓	1330	↓														
3	FLOIR-ole'	↓	1154	↓														
4	BKGO1e4'	↓	1203	↓										X			X	
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: <i>G. Semenza</i>	Date/Time: 6/5/24 1700	Received by: Tasman Lockbox	Date/Time: 6/5/24 1700	TAT Business Days	Field DO	Notes:
				Same Day	Field EC	
Relinquished by: Tasman Lockbox	Date/Time: 6/5/24 1803	Received by: <i>[Signature]</i>	Date/Time: 6/5/24 1803	1 Day	Field ORP	
				2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
				Standard	X Field Turb.	
Temperature Upon Receipt: 8.8	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2406054

Client: Noble Tasman Client Project ID: UPV 13-1034

Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #:

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>on ice</u>
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.

AS
Custodian Printed Name

6/5/24
Date/Time



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-W@4'
2406054-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.20	mg/kg	100	BHF0156	06/06/24	06/06/24	EPA 8260B	R-05
Toluene	3.3	0.50	"	"	"	"	"	"	"
Ethylbenzene	4.4	0.50	"	"	"	"	"	"	"
Xylenes (total)	55	1.0	"	"	"	"	"	"	"
1,2,4-Trimethylbenzene	28	0.50	"	"	"	"	"	"	"
1,3,5-Trimethylbenzene	15	0.50	"	"	"	"	"	"	"
Naphthalene	2.2	0.38	"	"	"	"	"	"	"
Gasoline Range Hydrocarbons	1500	50	"	"	"	"	"	"	"

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0349	87.2 %	50-150	"	"	"	"	"	"
Surrogate: Toluene-d8	0.0521	130 %	50-150	"	"	"	"	"	"
Surrogate: 4-Bromofluorobenzene	0.0538	135 %	50-150	"	"	"	"	"	"

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	4000	50	mg/kg	1	BHF0158	06/06/24	06/06/24	EPA 8015M	"
C28-C36 (ORO)	400	50	"	"	"	"	"	"	"

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	16.0	128 %	30-150	"	"	"	"	"	"

PAH by EPA Method 8270D SIM

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-W@4'
2406054-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	0.0136	0.00500	mg/kg	1	BHF0134	06/06/24	06/07/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.00642	0.00500	"	"	"	"	"	"	
Fluorene	0.0391	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.265	0.00500	"	"	"	"	"	"	E
2-Methylnaphthalene	0.486	0.00500	"	"	"	"	"	"	E

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0163	48.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0150	45.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0146	06/06/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-W@4'
2406054-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.499	0.200	mg/kg dry	1	BHF0175	06/07/24	06/10/24	EPA 6020B	
Barium	49.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.34	0.400	"	"	"	"	"	"	
Lead	5.01	0.200	"	"	"	"	"	"	
Nickel	2.88	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	6.35	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0184	06/07/24	06/07/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	100	0.0500	mg/L dry	1	BHF0186	06/07/24	06/14/24	EPA 6020B	
Magnesium	22.1	0.0500	"	"	"	"	"	"	
Sodium	13.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.311	0.00100	units	1	BHF0459	06/17/24	06/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-W@4'
2406054-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	91.4			%	1	BHF0148	06/06/24	06/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.101	0.0100		mmhos/cm	1	BHF0187	06/07/24	06/12/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/05/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.31			pH Units	1	BHF0189	06/07/24	06/12/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-S@4'
2406054-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0156	06/06/24	06/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0420	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0158	06/06/24	06/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	9.42	75.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-S@4'
2406054-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0134	06/06/24	06/07/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0260	78.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0268	80.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0146	06/06/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-S@4'
2406054-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.550	0.200	mg/kg dry	1	BHF0175	06/07/24	06/10/24	EPA 6020B	
Barium	45.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.74	0.400	"	"	"	"	"	"	
Lead	3.97	0.200	"	"	"	"	"	"	
Nickel	3.09	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	6.43	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0184	06/07/24	06/07/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	68.9	0.0500	mg/L dry	1	BHF0186	06/07/24	06/14/24	EPA 6020B	
Magnesium	14.6	0.0500	"	"	"	"	"	"	
Sodium	7.11	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.203	0.00100	units	1	BHF0459	06/17/24	06/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01R-S@4'
2406054-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	90.7			%	1	BHF0148	06/06/24	06/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.0291	0.0100		mmhos/cm	1	BHF0187	06/07/24	06/12/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/05/24 13:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.14			pH Units	1	BHF0189	06/07/24	06/12/24	EPA 9045D	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01-01@4'
2406054-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHF0156	06/06/24	06/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0471	118 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHF0158	06/06/24	06/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	13.3	106 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01-01@4'
2406054-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHF0134	06/06/24	06/07/24	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0273	82.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0283	85.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHF0146	06/06/24	06/10/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01-01@4'
2406054-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.423	0.200	mg/kg dry	1	BHF0175	06/07/24	06/10/24	EPA 6020B	
Barium	25.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.78	0.400	"	"	"	"	"	"	
Lead	2.31	0.200	"	"	"	"	"	"	
Nickel	1.90	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.68	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0184	06/07/24	06/07/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	17.8	0.0500	mg/L dry	1	BHF0186	06/07/24	06/14/24	EPA 6020B	
Magnesium	4.23	0.0500	"	"	"	"	"	"	
Sodium	1.76	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0974	0.00100	units	1	BHF0459	06/17/24	06/17/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

FL01-01@4'
2406054-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	97.0			%	1	BHF0148	06/06/24	06/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.103	0.0100		mmhos/cm	1	BHF0187	06/07/24	06/12/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/05/24 11:54**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.90			pH Units	1	BHF0189	06/07/24	06/12/24	EPA 9045D	

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

BKG01@4'
2406054-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **06/05/24 12:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	0.524	0.200	mg/kg dry	1	BHF0175	06/07/24	06/10/24	EPA 6020B	
Barium	25.2	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.80	0.400	"	"	"	"	"	"	
Lead	2.22	0.200	"	"	"	"	"	"	
Nickel	1.93	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.74	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **06/05/24 12:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHF0184	06/07/24	06/07/24	EPA 7196A	

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/05/24 12:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	23.7	0.0500	mg/L dry	1	BHF0186	06/07/24	06/14/24	EPA 6020B	
Magnesium	4.75	0.0500	"	"	"	"	"	"	
Sodium	1.98	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **06/05/24 12:03**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.0971	0.00100	units	1	BHF0459	06/17/24	06/17/24	Calculation	

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

BKG01@4'
2406054-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/05/24 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	97.9		%	1	BHF0148	06/06/24	06/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/05/24 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0619	0.0100	mmhos/cm	1	BHF0187	06/07/24	06/12/24	EPA 120.1	

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction

Date Sampled: **06/05/24 12:03**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.37		pH Units	1	BHF0189	06/07/24	06/12/24	EPA 9045D	

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Tasman Geosciences
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Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHF0156 - EPA 5030 Soil MS

Blank (BHF0156-BLK1)

Prepared & Analyzed: 06/06/24

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0447		"	0.0400		112	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

LCS (BHF0156-BS1)

Prepared & Analyzed: 06/06/24

Benzene	0.100	0.0020	mg/kg	0.100		100	70-130			
Toluene	0.105	0.0050	"	0.100		105	70-130			
Ethylbenzene	0.107	0.0050	"	0.100		107	70-130			
m,p-Xylene	0.216	0.010	"	0.200		108	70-130			
o-Xylene	0.103	0.0050	"	0.100		103	70-130			
1,2,4-Trimethylbenzene	0.101	0.0050	"	0.100		101	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
Naphthalene	0.0931	0.0038	"	0.100		93.1	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0439		"	0.0400		110	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	50-150			

Matrix Spike (BHF0156-MS1)

Source: 2406052-01

Prepared & Analyzed: 06/06/24

Benzene	0.102	0.0020	mg/kg	0.100	ND	102	70-130			
Toluene	0.109	0.0050	"	0.100	ND	109	70-130			
Ethylbenzene	0.111	0.0050	"	0.100	ND	111	70-130			
m,p-Xylene	0.220	0.010	"	0.200	ND	110	70-130			
o-Xylene	0.106	0.0050	"	0.100	ND	106	70-130			
1,2,4-Trimethylbenzene	0.100	0.0050	"	0.100	ND	100	70-130			
1,3,5-Trimethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130			
Naphthalene	0.0892	0.0038	"	0.100	ND	89.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0405		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		102	50-150			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		97.0	50-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHF0156 - EPA 5030 Soil MS

Matrix Spike Dup (BHF0156-MSD1)	Source: 2406052-01			Prepared & Analyzed: 06/06/24						
Benzene	0.106	0.0020	mg/kg	0.100	ND	106	70-130	3.59	30	
Toluene	0.114	0.0050	"	0.100	ND	114	70-130	3.77	30	
Ethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	0.215	30	
m,p-Xylene	0.221	0.010	"	0.200	ND	110	70-130	0.559	30	
o-Xylene	0.109	0.0050	"	0.100	ND	109	70-130	2.46	30	
1,2,4-Trimethylbenzene	0.103	0.0050	"	0.100	ND	103	70-130	2.49	30	
1,3,5-Trimethylbenzene	0.105	0.0050	"	0.100	ND	105	70-130	0.802	30	
Naphthalene	0.0911	0.0038	"	0.100	ND	91.1	70-130	2.03	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0427</i>		<i>"</i>	<i>0.0400</i>		<i>107</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0401</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHF0158 - EPA 3550A

Blank (BHF0158-BLK1)

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	8.82		"	12.5		70.5		30-150			

LCS (BHF0158-BS1)

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	552	50	mg/kg	500		110		70-130			
Surrogate: <i>o</i> -Terphenyl	14.8		"	12.5		119		30-150			

Matrix Spike (BHF0158-MS1)

Source: 2406052-01

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	594	50	mg/kg	500	35.8	112		70-130			
Surrogate: <i>o</i> -Terphenyl	14.6		"	12.5		117		30-150			

Matrix Spike Dup (BHF0158-MSD1)

Source: 2406052-01

Prepared & Analyzed: 06/06/24

C10-C28 (DRO)	545	50	mg/kg	500	35.8	102		70-130	8.52	20	
Surrogate: <i>o</i> -Terphenyl	13.9		"	12.5		111		30-150			

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHF0134 - EPA 5030 Soil MS

Blank (BHF0134-BLK1)

Prepared & Analyzed: 06/06/24

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0296		"	0.0333		88.9	40-150			
Surrogate: Fluoranthene-d10	0.0276		"	0.0333		82.8	40-150			

LCS (BHF0134-BS1)

Prepared & Analyzed: 06/06/24

Acenaphthene	0.0261	0.00500	mg/kg	0.0333		78.4	31-137			
Anthracene	0.0247	0.00500	"	0.0333		74.1	30-120			
Benzo (a) anthracene	0.0264	0.00500	"	0.0333		79.1	30-120			
Benzo (a) pyrene	0.0275	0.00500	"	0.0333		82.5	30-120			
Benzo (b) fluoranthene	0.0228	0.00500	"	0.0333		68.4	30-120			
Benzo (k) fluoranthene	0.0201	0.00500	"	0.0333		60.3	30-120			
Chrysene	0.0240	0.00500	"	0.0333		72.1	30-120			
Dibenz (a,h) anthracene	0.0384	0.00500	"	0.0333		115	30-120			
Fluoranthene	0.0235	0.00500	"	0.0333		70.6	30-120			
Fluorene	0.0250	0.00500	"	0.0333		75.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0231	0.00500	"	0.0333		69.3	30-120			
Pyrene	0.0373	0.00500	"	0.0333		112	35-142			
1-Methylnaphthalene	0.0253	0.00500	"	0.0333		76.0	35-142			
2-Methylnaphthalene	0.0252	0.00500	"	0.0333		75.7	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0255		"	0.0333		76.6	40-150			
Surrogate: Fluoranthene-d10	0.0245		"	0.0333		73.4	40-150			

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHF0134 - EPA 5030 Soil MS

Matrix Spike (BHF0134-MS1)	Source: 2406036-01			Prepared & Analyzed: 06/06/24							
Acenaphthene	0.0309	0.00500	mg/kg	0.0333	ND	92.6	31-137				
Anthracene	0.0145	0.00500	"	0.0333	ND	43.6	30-120				
Benzo (a) anthracene	0.0286	0.00500	"	0.0333	ND	85.7	30-120				
Benzo (a) pyrene	0.0182	0.00500	"	0.0333	ND	54.6	30-120				
Benzo (b) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.4	30-120				
Benzo (k) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.7	30-120				
Chrysene	0.0522	0.00500	"	0.0333	ND	157	30-120				QM-01
Dibenz (a,h) anthracene	0.0200	0.00500	"	0.0333	ND	60.0	30-120				
Fluoranthene	0.0263	0.00500	"	0.0333	0.00944	50.7	30-120				
Fluorene	0.0671	0.00500	"	0.0333	0.0428	73.0	30-120				
Indeno (1,2,3-cd) pyrene	0.0258	0.00500	"	0.0333	ND	77.3	30-120				
Pyrene	0.0280	0.00500	"	0.0333	0.00704	63.0	35-142				
1-Methylnaphthalene	0.0761	0.00500	"	0.0333	0.0293	140	15-130				QM-01
2-Methylnaphthalene	0.0298	0.00500	"	0.0333	ND	89.4	15-130				
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0232</i>		<i>"</i>	<i>0.0333</i>		<i>69.5</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0277</i>		<i>"</i>	<i>0.0333</i>		<i>83.2</i>	<i>40-150</i>				

Matrix Spike Dup (BHF0134-MSD1)	Source: 2406036-01			Prepared & Analyzed: 06/06/24							
Acenaphthene	0.0336	0.00500	mg/kg	0.0333	ND	101	31-137	8.39	30		
Anthracene	0.0278	0.00500	"	0.0333	ND	83.5	30-120	62.7	30		QM-01
Benzo (a) anthracene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	17.1	30		
Benzo (a) pyrene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	0.471	30		
Benzo (b) fluoranthene	0.0208	0.00500	"	0.0333	ND	62.4	30-120	13.7	30		
Benzo (k) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.3	30-120	3.02	30		
Chrysene	0.0439	0.00500	"	0.0333	ND	132	30-120	17.4	30		QM-01
Dibenz (a,h) anthracene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	7.86	30		
Fluoranthene	0.0309	0.00500	"	0.0333	0.00944	64.4	30-120	16.0	30		
Fluorene	0.0981	0.00500	"	0.0333	0.0428	166	30-120	37.5	30		QM-01
Indeno (1,2,3-cd) pyrene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	36.0	30		QM-01
Pyrene	0.0361	0.00500	"	0.0333	0.00704	87.2	35-142	25.2	30		
1-Methylnaphthalene	0.118	0.00500	"	0.0333	0.0293	265	15-130	43.0	50		QM-01
2-Methylnaphthalene	0.0417	0.00500	"	0.0333	ND	125	15-130	33.3	50		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0325</i>		<i>"</i>	<i>0.0333</i>		<i>97.4</i>	<i>40-150</i>				
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0282</i>		<i>"</i>	<i>0.0333</i>		<i>84.6</i>	<i>40-150</i>				

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHF0146 - EPA 3050B

Blank (BHF0146-BLK1)		Prepared: 06/06/24 Analyzed: 06/10/24									
Boron	ND	2.00	mg/L								
LCS (BHF0146-BS1)		Prepared: 06/06/24 Analyzed: 06/10/24									
Boron	5.19	2.00	mg/L	5.00	104	80-120					
Duplicate (BHF0146-DUP1)		Source: 2406053-01		Prepared: 06/06/24 Analyzed: 06/10/24							
Boron	0.162	2.00	mg/L	0.188	14.6	20					
Matrix Spike (BHF0146-MS1)		Source: 2406053-01		Prepared: 06/06/24 Analyzed: 06/10/24							
Boron	4.78	2.00	mg/L	5.03	0.188	91.4	75-125				
Matrix Spike Dup (BHF0146-MSD1)		Source: 2406053-01		Prepared: 06/06/24 Analyzed: 06/10/24							
Boron	5.18	2.00	mg/L	5.03	0.188	99.3	75-125	7.94	25		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHF0175 - EPA 3050B

Blank (BHF0175-BLK1)

Prepared: 06/07/24 Analyzed: 06/10/24

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BHF0175-BS1)

Prepared: 06/07/24 Analyzed: 06/10/24

Arsenic	41.5	0.200	mg/kg wet	40.0		104	80-120			
Barium	37.8	0.400	"	40.0		94.6	80-120			
Cadmium	1.92	0.200	"	2.00		96.0	80-120			
Copper	41.6	0.400	"	40.0		104	80-120			
Lead	18.8	0.200	"	20.0		94.1	80-120			
Nickel	41.1	0.400	"	40.0		103	80-120			
Silver	1.92	0.0200	"	2.00		96.1	80-120			
Zinc	41.6	0.400	"	40.0		104	80-120			
Selenium	3.75	0.260	"	4.00		93.6	80-120			

Duplicate (BHF0175-DUP1)

Source: 2406054-01

Prepared: 06/07/24 Analyzed: 06/10/24

Arsenic	0.537	0.179	mg/kg dry		0.499		7.45	20		
Barium	42.4	0.357	"		49.2		14.9	20		
Cadmium	0.0754	0.179	"		0.0765		1.43	20		
Copper	3.41	0.357	"		3.34		2.05	20		
Lead	6.94	0.179	"		5.01		32.4	20		QR-04
Nickel	2.77	0.357	"		2.88		3.86	20		
Silver	0.0160	0.0179	"		0.0184		13.7	20		
Zinc	6.18	0.357	"		6.35		2.64	20		
Selenium	ND	0.232	"		ND			20		

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Total Metals by EPA 6020B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source		%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BHF0175 - EPA 3050B

Matrix Spike (BHF0175-MS1)	Source: 2406054-01			Prepared: 06/07/24		Analyzed: 06/10/24					
Arsenic	14.0	0.200	mg/kg dry	41.1	0.499	32.7	75-125				QM-05
Barium	84.3	0.400	"	41.1	49.2	85.2	75-125				
Cadmium	2.05	0.200	"	2.06	0.0765	96.2	75-125				
Copper	33.2	0.400	"	41.1	3.34	72.5	75-125				QM-07
Lead	21.9	0.200	"	20.6	5.01	82.3	75-125				
Nickel	33.1	0.400	"	41.1	2.88	73.3	75-125				QM-07
Silver	1.95	0.0200	"	2.06	0.0184	94.0	75-125				
Zinc	20.2	0.400	"	41.1	6.35	33.8	75-125				QM-05
Selenium	3.38	0.260	"	4.11	ND	82.2	75-125				

Matrix Spike Dup (BHF0175-MSD1)	Source: 2406054-01			Prepared: 06/07/24		Analyzed: 06/10/24					
Arsenic	14.1	0.200	mg/kg dry	40.8	0.499	33.4	75-125	1.24	25		QM-05
Barium	91.0	0.400	"	40.8	49.2	103	75-125	7.74	25		
Cadmium	2.06	0.200	"	2.04	0.0765	97.0	75-125	0.148	25		
Copper	32.2	0.400	"	40.8	3.34	70.5	75-125	3.16	25		QM-07
Lead	23.4	0.200	"	20.4	5.01	90.1	75-125	6.52	25		
Nickel	32.1	0.400	"	40.8	2.88	71.4	75-125	3.09	25		QM-07
Silver	1.98	0.0200	"	2.04	0.0184	96.1	75-125	1.36	25		
Zinc	21.1	0.400	"	40.8	6.35	36.2	75-125	4.28	25		QM-05
Selenium	3.33	0.260	"	4.08	ND	81.6	75-125	1.47	25		

Post Spike (BHF0175-PS1)	Source: 2406054-01			Prepared: 06/07/24		Analyzed: 06/10/24					
Arsenic	38.9		ug/l	100	1.17	37.7	75-125				QM-01
Barium	223		"	100	115	108	75-125				
Cadmium	5.30		"	5.00	0.179	102	75-125				
Copper	85.9		"	100	7.82	78.1	75-125				
Lead	56.1		"	50.0	11.7	88.8	75-125				
Nickel	85.0		"	100	6.74	78.3	75-125				
Silver	5.27		"	5.00	0.0430	105	75-125				
Zinc	52.3		"	100	14.8	37.4	75-125				QM-01
Selenium	9.80		"	10.0	0.112	96.8	75-125				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014
Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike	Source		%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit		

Batch BHF0184 - 3060A Mod

Blank (BHF0184-BLK1)

Prepared & Analyzed: 06/07/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHF0184-BS1)

Prepared & Analyzed: 06/07/24

Chromium, Hexavalent 25.2 0.30 mg/kg wet 25.0 101 80-120

Duplicate (BHF0184-DUP1)

Source: 2406052-01

Prepared & Analyzed: 06/07/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHF0184-MS1)

Source: 2406052-01

Prepared & Analyzed: 06/07/24

Chromium, Hexavalent 25.8 0.30 mg/kg dry 25.9 ND 99.6 75-125

Matrix Spike Dup (BHF0184-MSD1)

Source: 2406052-01

Prepared & Analyzed: 06/07/24

Chromium, Hexavalent 27.6 0.30 mg/kg dry 25.4 ND 109 75-125 6.69 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014

Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHF0186 - General Preparation

Blank (BHF0186-BLK1)

Prepared: 06/07/24 Analyzed: 06/14/24

Calcium	ND	0.0500	mg/L wet							
Magnesium	ND	0.0500	"							
Sodium	ND	0.0500	"							

LCS (BHF0186-BS1)

Prepared: 06/07/24 Analyzed: 06/14/24

Calcium	5.25	0.0500	mg/L wet	5.00	105	70-130				
Magnesium	5.45	0.0500	"	5.00	109	70-130				
Sodium	5.44	0.0500	"	5.00	109	70-130				

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-10I4

Project Number: UWRWE-A3640-ABN

Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC			RPD	Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHF0148 - General Preparation

Duplicate (BHF0148-DUP1)

Source: 2406030-01

Prepared & Analyzed: 06/06/24

% Solids	83.7		%		83.5			0.267	20	
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014

Project Number: UWRWE-A3640-ABN
Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch BHF0187 - General Preparation

Blank (BHF0187-BLK1)

Prepared: 06/07/24 Analyzed: 06/12/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHF0187-BS1)

Prepared: 06/07/24 Analyzed: 06/12/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BHF0187-DUP1)

Source: 2406052-01

Prepared: 06/07/24 Analyzed: 06/12/24

Specific Conductance (EC) 0.149 0.0100 mmhos/cm 0.151 1.47 20

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014

Project Number: UWRWE-A3640-ABN

Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Physical Parameters by APHA/ASTM/EPA Methods, Saturated Paste Extraction - Quality Control

Summit Scientific

Analyte	Result	Reporting		Spike	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch BHF0189 - General Preparation

LCS (BHF0189-BS1)

Prepared: 06/07/24 Analyzed: 06/12/24

pH	9.17	pH Units	9.18	99.9	95-105
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Duplicate (BHF0189-DUP1)

Source: 2406052-01

Prepared: 06/07/24 Analyzed: 06/12/24

pH	7.93	pH Units	7.99	0.754	20
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - UPV 13-1014

Project Number: UWRWE-A3640-ABN

Project Manager: Jacob Whritenour

Reported:
06/20/24 12:24

Notes and Definitions

- R-05 The sample was diluted due to the presence of high levels of non-target analytes resulting in elevated reporting limits.
- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- QM-05 The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference