





SITE NAME: Wolfe USX CC07-16 FAC							DATE: 5/2/2024	REM. PROJECT #: 33389	WEATHER: 60s		
SITE DIRECTIONS:							CLIENT: Noble				
LEGALS AND LAT/LONG: 40.321420, -104482872							TASMAN PERSONNEL: JH, LB				
SOIL TYPES: Well Graded Sand - SW							SURFACE GRADIENT: East				
SOIL SAMPLING							FACILITY INFRASTRUCTURE				
Date/Time	Soil Sample ID	PID (ppm)	Visual	Olfactory	Photo?	Grab or Lab Sample?	EQUIPMENT		Quantity		
							Above Ground Storage Tank (AST)				
5/2/2024 09:30	FLARE01 @ 0-6"	1.3	No Staining	No Odor	Yes	Grab	Buried or Partially Buried Vessel				
5/2/2024 09:35	FLARE02 @ 0-6"	1.9	No Staining	No Odor	Yes	Grab	Separator				
5/2/2024 09:40	MH01 @ 0-6"	2.0	No Staining	No Odor	Yes	Grab	Emission Control Device (ECD)				
5/2/2024 10:00	PWV01-B @ 4'	1.1	No Staining	No Odor	Yes	Lab	Dump Line				
5/2/2024 10:05	PWV01-N @ 2.5'	1.1	No Staining	No Odor	Yes	On-Hold	Wellhead				
5/2/2024 10:10	PWV01-W @ 2.5'	3.9	No Staining	No Odor	Yes	Lab	Flowline				
5/2/2024 10:15	PWV01-E @ 2.5'	0.8	No Staining	No Odor	Yes	On-Hold	Other:				
5/2/2024 10:20	PWV02-B @ 4'	7.8	No Staining	No Odor	Yes	Lab	Soil Loads Removed				
5/2/2024 10:25	PWV02-W @ 2.5'	1.7	No Staining	No Odor	Yes	Lab	IMPACTED SOIL IDENTIFIED?				
5/2/2024 10:30	PWV02-E @ 2.5'	0.5	No Staining	No Odor	Yes	On-Hold	ESTIMATED VOLUME OF IMPACTS:				
5/2/2024 10:35	PWV03-B @ 4'	5.2	No Staining	No Odor	Yes	Lab	Date	Number	CY		
5/2/2024 10:40	PWV03-W @ 2.5'	1.1	No Staining	No Odor	Yes	On-Hold					
5/2/2024 10:45	PWV03-S @ 2.5'	5.3	No Staining	No Odor	Yes	Lab					
5/2/2024 10:50	PWV03-E @ 2.5'	0.6	No Staining	No Odor	Yes	On-Hold					
5/2/2024 12:05	SEP01-DL @ 3'	2.6	No Staining	No Odor	Yes	Lab					
5/2/2024 12:35	AST01 @ 0-6"	13.9	No Staining	No Odor	Yes	Lab	Total Removed		0	0	
5/2/2024 12:40	AST02 @ 0-6"	3.2	No Staining	No Odor	Yes	Lab	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:				

Photographic Log

									
						Equipment ID:			Equipment Type:
Material:		Volume:	Contents:		Material:		Volume:	Contents:	
Notes/Conditions: FLARE01 @ 0-6"					Notes/Conditions: FLARE02				

Photographic Log


Equipment ID:		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions: ^{MH01}				Notes/Conditions:			

Photographic Log



Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:	

Notes/Conditions: PWV01-B

Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:	

Notes/Conditions: PWV01-N

Photographic Log



Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:	

Notes/Conditions: PWV01-W

Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:	

Notes/Conditions: PWV01-E

Photographic Log



Equipment ID:			Equipment Type:			Equipment ID:			Equipment Type:		
Material:		Volume:	Contents:			Material:		Volume:	Contents:		
Notes/Conditions: PWV02-B						Notes/Conditions: PWV02-W					

Photographic Log





Equipment ID:	Equipment Type:
Material:	Volume:
Contents:	

Notes/Conditions: PWV02-E

Equipment ID:	Equipment Type:
Material:	Volume:
Contents:	

Notes/Conditions: PWV03-B

Photographic Log

					
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: <small>PWV03-W</small>			Notes/Conditions: <small>PWV03-S</small>		

Photographic Log

									
						Equipment ID:			Equipment Type:
Material:		Volume:	Contents:		Material:		Volume:	Contents:	
Notes/Conditions: PWV03-E					Notes/Conditions: SEP01-DL @ 4'				

Photographic Log


Equipment ID:		Equipment Type:		Equipment ID:		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions: AST01				Notes/Conditions: AST02			

TABLE 1
FIELD DATA SUMMARY TABLE
NOBLE (100322)
WOLFE USX CC07-16, WELD COUNTY, COLORADO
REM # 33389

Sample ID	Sample Date	Depth (ft)	GPS Data		PDOP Value	VOC Concentration (ppm)
			Latitude	Longitude		
FLARE01 @ 0-6"	5/2/2024	0.5	40.319934	-104.482968	1.0	1.3
FLARE02 @ 0-6"	5/2/2024	0.5	40.319885	-104.482967	1.0	1.9
MH01 @ 0-6"	5/2/2024	0.5	40.319946	-104.482918	0.8	2.0
PWV01-B @ 4'	5/2/2024	4	40.319991	-104.482435	1.0	1.1
PWV01-N @ 2.5'	5/2/2024	2.5	40.320015	-104.482434	0.8	1.1
PWV01-W @ 2.5'	5/2/2024	2.5	40.320002	-104.482460	0.9	3.9
PWV01-E @ 2.5'	5/2/2024	2.5	40.319993	-104.482407	0.8	0.8
PWV02-B @ 4'	5/2/2024	4	40.319957	-104.482443	0.9	7.8
PWV02-W @ 2.5'	5/2/2024	2.5	40.319955	-104.482482	0.9	1.7
PWV02-E @ 2.5'	5/2/2024	2.5	40.319952	-104.482416	0.9	0.5
PWV03-B @ 4'	5/2/2024	4	40.319914	-104.482454	0.9	5.2
PWV03-W @ 2.5'	5/2/2024	2.5	40.319917	-104.482480	0.9	1.1
PWV03-S @ 2.5'	5/2/2024	2.5	40.319896	-104.482452	1.0	5.3
PWV03-E @ 2.5'	5/2/2024	2.5	40.319921	-104.482419	0.8	0.6
SEP01-DL @ 3'	5/2/2024	3	NC	NC	NC	2.6
AST01 @ 0-6"	5/2/2024	0.5	40.319964	-104.482526	0.8	13.9
AST02 @ 0-6"	5/2/2024	0.5	40.319913	-104.482521	0.9	3.2

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

NC = Not collected

 = Source material characterization sample, excavated and transported off site for disposal.

 = Material excavated and transported off site for disposal.

TABLE 2
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE (100322)
WOLFE USX CC07-16, WELD COUNTY, COLORADO
REM # 33389

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**		
AST01@0-6"	05/02/2024	0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
AST02@0-6"	05/02/2024	0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-B@4'	05/02/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV01-W@2.5'	05/02/2024	2.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV02-B@4'	05/02/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV02-W@2.5'	05/02/2024	2.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV03-B@4'	05/02/2024	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
PWV03-S@2.5'	05/02/2024	2.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<500	<0.50	<50	<50
SEP01-DL@3'	05/02/2024	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	110	<0.50	110	<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

NA - Not analyzed

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.

TABLE 3
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE (100322)
WOLFE USX CC07-16, WELD COUNTY, COLORADO
REM # 33389

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
AST01@0-6"	05/02/2024	0.5	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0101	0.0218
AST02@0-6"	05/02/2024	0.5	<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
PWV01-B@4'	05/02/2024	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
PWV01-W@2.5'	05/02/2024	2.5	<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
PWV02-B@4'	05/02/2024	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
PWV02-W@2.5'	05/02/2024	2.5	<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	0.00697
PWV03-B@4'	05/02/2024	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
PWV03-S@2.5'	05/02/2024	2.5	<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'	05/02/2024	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. 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

NA - Not analyzed

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.

TABLE 4
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE (100322)
WOLFE USX CC07-16, WELD COUNTY, COLORADO
REM # 33389

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
AST01@0-6"	05/02/2024	0.5	9.12	0.265	1.30	2.73
AST02@0-6"	05/02/2024	0.5	7.53	0.0944	0.431	<2.00
PWV01-B@4'	05/02/2024	4	9.02	0.271	0.144	<2.00
PWV01-W@2.5'	05/02/2024	2.5	8.19	0.266	0.340	<2.00
PWV02-B@4'	05/02/2024	4	8.40	0.674	2.52	<2.00
PWV02-W@2.5'	05/02/2024	2.5	7.89	0.168	0.319	<2.00
PWV03-B@4'	05/02/2024	4	8.52	0.254	0.287	<2.00
PWV03-S@2.5'	05/02/2024	2.5	8.21	0.157	0.0861	<2.00
SEP01-DL@3'	05/02/2024	3	8.04	0.425	4.12	2.66

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

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.

TABLE 5
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE (100322)
WOLFE USX CC07-16, WELD COUNTY, COLORADO
REM # 33389

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
AST01@0-6"	05/02/2024	0.5	1.10	49.3	<0.180	<0.30	3.76	5.22	3.20	<0.234	0.0225	13.9
AST02@0-6"	05/02/2024	0.5	1.08	52.7	<0.200	<0.30	3.79	5.20	3.43	<0.260	0.0270	14.6
PWV01-B@4'	05/02/2024	4	1.67	101	0.242	<0.30	3.82	6.13	4.51	<0.260	0.0334	16.8
PWV01-W@2.5'	05/02/2024	2.5	1.19	47.1	<0.200	<0.30	3.50	4.75	3.14	<0.260	0.0212	13.2
PWV02-B@4'	05/02/2024	4	2.15	145	0.262	<0.30	3.91	6.50	4.99	<0.234	0.0396	16.9
PWV02-W@2.5'	05/02/2024	2.5	1.20	57.6	<0.200	<0.30	3.73	5.29	3.51	<0.260	0.0239	14.6
PWV03-B@4'	05/02/2024	4	1.13	67.3	0.217	<0.30	4.55	7.18	3.79	<0.236	0.0306	16.5
PWV03-S@2.5'	05/02/2024	2.5	1.07	56.3	0.209	<0.30	3.88	5.68	3.42	<0.260	0.0250	15.6
SEP01-DL@3'	05/02/2024	3	1.21	66.5	<0.200	<0.30	3.79	5.09	3.48	<0.260	<0.0200	14.1

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

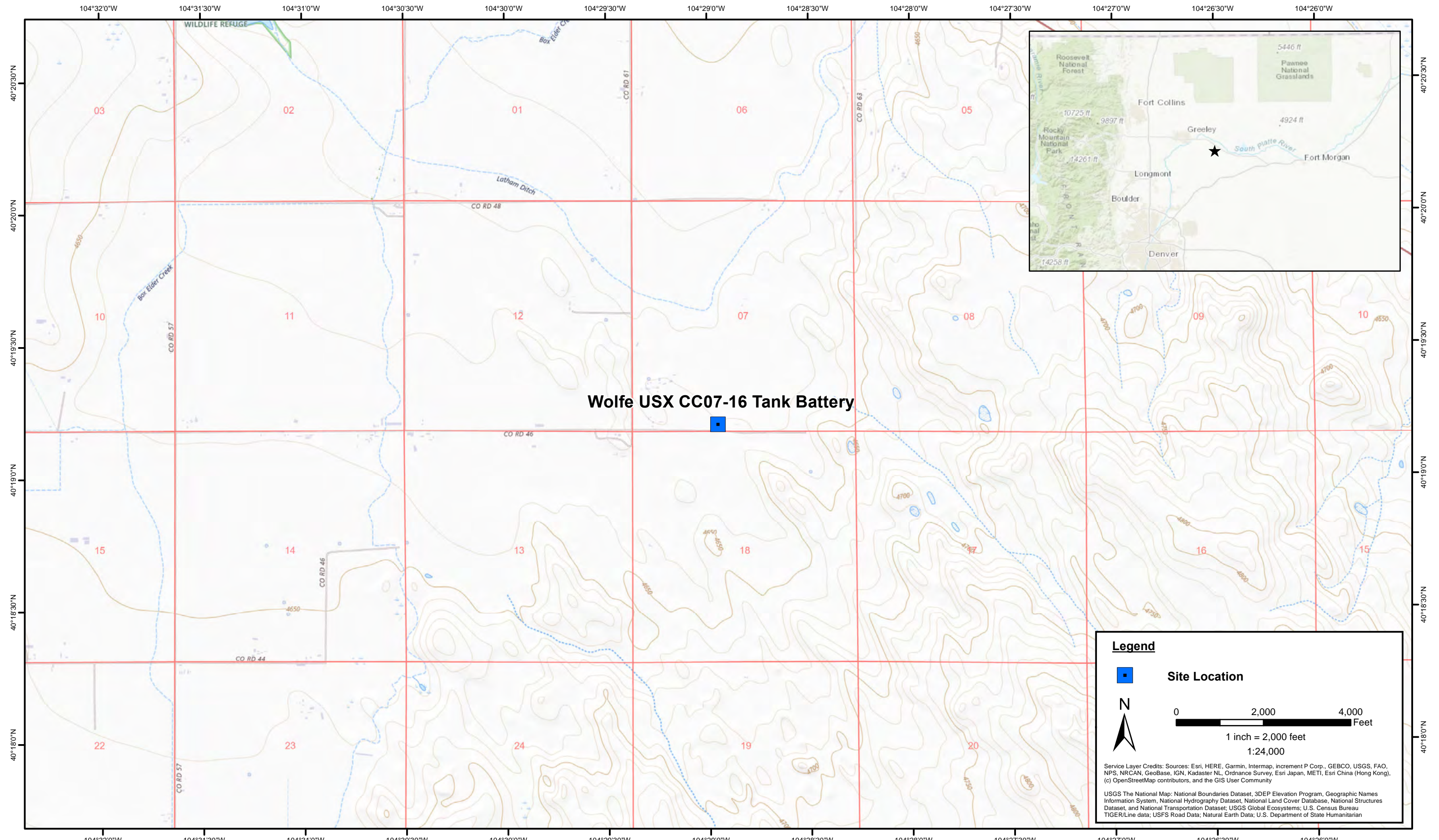
2. Red & blue highlighted soil analytical values indicate an exceedance of the referenced soil screening level (SSL)

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

= Source material characterization sample, excavated and transported off site for disposal.

= Material excavated and transported off site for disposal.



DATE:	June 2024
DESIGNED BY:	J. Whritenour
DRAWN BY:	L. Reed

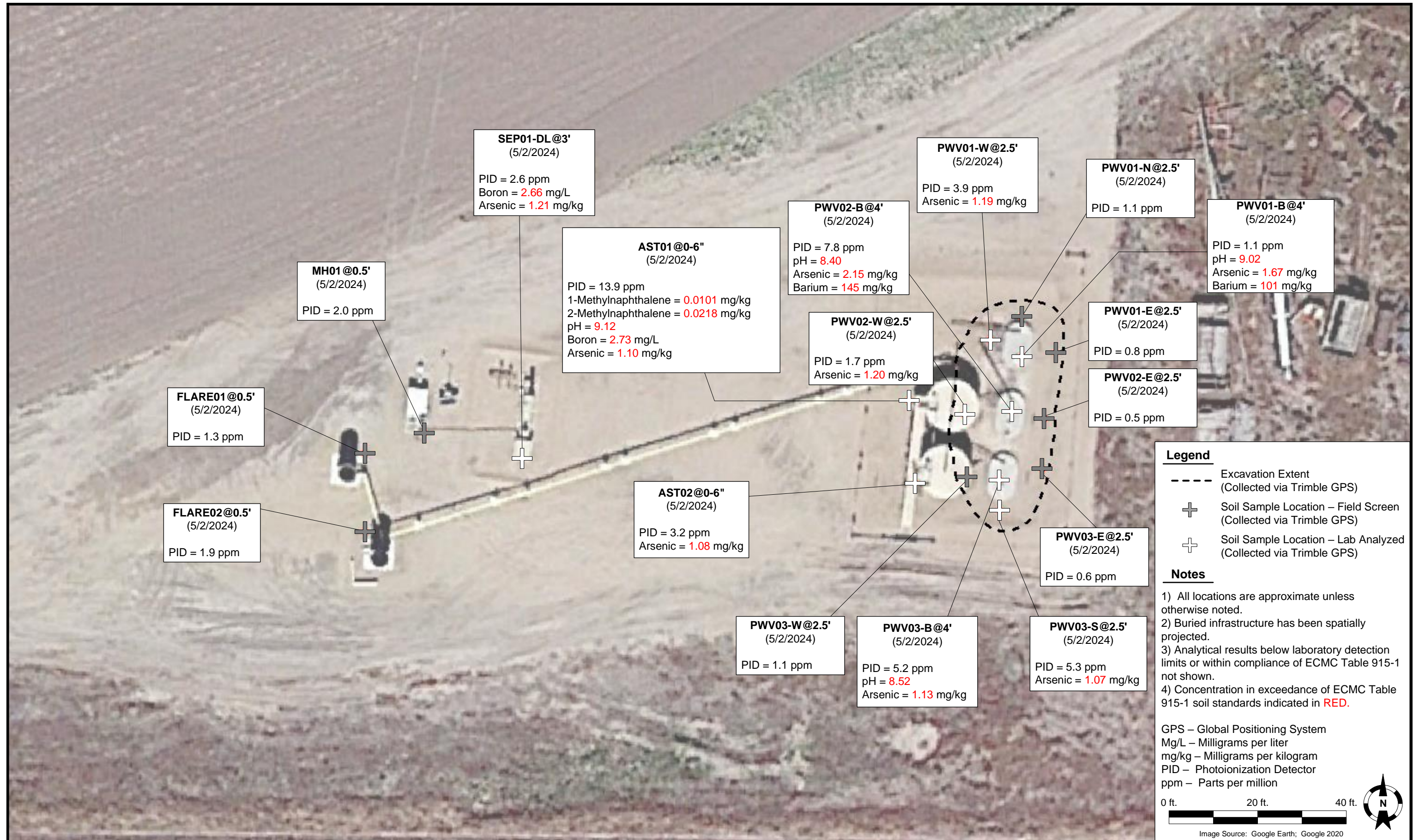


Tasman, Inc.
 6855 W. 119th Ave
 Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Wolfe USX CC07-16 Tank Battery
 SESW Sec. 7-T4N-R63W
 Weld County, Colorado

Site Location Map

Figure
1



SEP01-DL@3'
(5/2/2024)
PID = 2.6 ppm
Boron = **2.66** mg/L
Arsenic = **1.21** mg/kg

MH01@0.5'
(5/2/2024)
PID = 2.0 ppm

AST01@0-6"
(5/2/2024)
PID = 13.9 ppm
1-Methylnaphthalene = **0.0101** mg/kg
2-Methylnaphthalene = **0.0218** mg/kg
pH = **9.12**
Boron = **2.73** mg/L
Arsenic = **1.10** mg/kg

PWV02-B@4'
(5/2/2024)
PID = 7.8 ppm
pH = **8.40**
Arsenic = **2.15** mg/kg
Barium = **145** mg/kg

PWV01-W@2.5'
(5/2/2024)
PID = 3.9 ppm
Arsenic = **1.19** mg/kg

PWV01-N@2.5'
(5/2/2024)
PID = 1.1 ppm

PWV01-B@4'
(5/2/2024)
PID = 1.1 ppm
pH = **9.02**
Arsenic = **1.67** mg/kg
Barium = **101** mg/kg

FLARE01@0.5'
(5/2/2024)
PID = 1.3 ppm

PWV02-W@2.5'
(5/2/2024)
PID = 1.7 ppm
Arsenic = **1.20** mg/kg

PWV01-E@2.5'
(5/2/2024)
PID = 0.8 ppm

PWV02-E@2.5'
(5/2/2024)
PID = 0.5 ppm

FLARE02@0.5'
(5/2/2024)
PID = 1.9 ppm

AST02@0-6"
(5/2/2024)
PID = 3.2 ppm
Arsenic = **1.08** mg/kg

PWV03-E@2.5'
(5/2/2024)
PID = 0.6 ppm

PWV03-W@2.5'
(5/2/2024)
PID = 1.1 ppm

PWV03-B@4'
(5/2/2024)
PID = 5.2 ppm
pH = **8.52**
Arsenic = **1.13** mg/kg

PWV03-S@2.5'
(5/2/2024)
PID = 5.3 ppm
Arsenic = **1.07** mg/kg

DATE:	6/7/24
DESIGNED BY:	JW
DRAWN BY:	JW

TASMAN
GEOSCIENCES

Tasman Geosciences, Inc.
6855 W 119th Avenue
Broomfield, CO 80020

Noble Energy, Inc. – DJ Basin
Wolfe USX CC07-16 Facility
SESW, Section 7, Township 4 North, Range 63 West
Weld County, Colorado

Tank Battery Closure & Soil
Analytical Results Map
(05/02/2024)

FIGURE
2

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 10, 2024

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

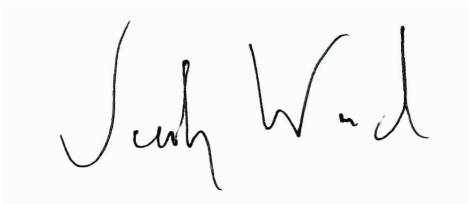
Broomfield, CO 80020

RE: Noble - Wolfe USX CC07-16 FAC

Work Order #2405043

Enclosed are the results of analyses for samples received by Summit Scientific on 05/02/24 18:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial 'J' and a distinct 'W'.

Jacob Wood For Paul Shrewsbury

President



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

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
 Project Manager: Jacob Whritenour

Reported:
 06/10/24 08:47


ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PWV01-B@4'	2405043-01	Soil	05/02/24 10:00	05/02/24 18:00
PWV01-W@2.5'	2405043-03	Soil	05/02/24 10:10	05/02/24 18:00
PWV02-B@4'	2405043-05	Soil	05/02/24 10:20	05/02/24 18:00
PWV02-W@2.5'	2405043-06	Soil	05/02/24 10:25	05/02/24 18:00
PWV03-B@4'	2405043-08	Soil	05/02/24 10:35	05/02/24 18:00
PWV03-S@2.5'	2405043-10	Soil	05/02/24 10:45	05/02/24 18:00
SEP01-DL@3'	2405043-12	Soil	05/02/24 12:05	05/02/24 18:00
AST01@0-6"	2405043-13	Soil	05/02/24 12:35	05/02/24 18:00
AST02@0-6"	2405043-14	Soil	05/02/24 12:40	05/02/24 18:00

Case Narrative

This revised report has been reissued per client request on 06/10/2024.
 Original report sent on 06/06/2024 at 11:53 AM MT.

Summit Scientific



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Client: Noble / Tasman	Send Data To: Project Manager: Jake Whritenour	Send Invoice To: Company: Chevron
Address: 6855 W. 119th Ave	E-Mail: Jwhritenour@tasman-geo.com	Project Name/Location:
City/State/Zip: Broomfield, CO 80020	Project Name: <u>Wolfe USX C007-16 FAC</u>	AFE#: <u>UWRWE-A4002-ABN</u>
Phone: <u>970 214 7901</u>	Project Number:	PO/Billing Codes:
Sampler Name: <u>L. Buch J. Hestmark</u>		Contact: <u>Miguel Barron</u>

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	Metals - 915		HOLD	
1	PWV01-B@4'	5/2/24	1000	3			X			X				X	X	X	X	X	X		pH, EC, SAR by saturated paste
2	PWV01-N@2.5'		1005				X							X	X	X	X	X	X		
3	PWV01-W@2.5'		1010				X							X	X	X	X	X	X		
4	PWV01-E@2.5'		1015				X							X	X	X	X	X	X		
5	PWV02-B@4'		1020				X							X	X	X	X	X	X		
6	PWV02-W@2.5'		1025				X							X	X	X	X	X	X		
7	PWV02-E@2.5'		1030				X							X	X	X	X	X	X		
8	PWV03-B@4'		1035				X							X	X	X	X	X	X		
9	PWV03-W@2.5'		1040				X							X	X	X	X	X	X		
10	PWV03-S@2.5'		1045				X							X	X	X	X	X	X		
11	PWV03-E@2.5'		1050				X							X	X	X	X	X	X		
12	SEPOL-DL@3'		1205				X							X	X	X	X	X	X		
13	AST01@0-6"		1235				X							X	X	X	X	X	X		
14	AST02@0-6"		1240				X							X	X	X	X	X	X		
15							X							X	X	X	X	X	X		

Relinquished by: <u>[Signature]</u> Date/Time: <u>5/2/24 1650</u>	Received by: <u>Tasman Lock Box</u> Date/Time: <u>5/2/24 1650</u>	TAT Business Days	Field DO	Notes:
		Same Day	Field EC	
Relinquished by: <u>Tasman Lock Box</u> Date/Time: <u>5/2/24 1800</u>	Received by: <u>[Signature]</u> Date/Time: <u>5/2/24 1800</u>	1 Day	Field ORP	
		2 Days	Field pH	
Relinquished by: _____ Date/Time: _____	Received by: _____ Date/Time: _____	3 Days	Field Temp.	
		Standard	Field Turb.	
Temperature Upon Receipt: <u>12.4</u>	Corrected Temperature: <u>8</u>	IR gun #: <u>1</u>	HNO3 lot #:	



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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-B@4'
2405043-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0321	80.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0387	96.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0389	97.3 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.01	72.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-B@4'
2405043-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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: **05/02/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0149	44.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0157	47.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 10:00**

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 - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-B@4'
2405043-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.67	0.200	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B
Barium	101	0.400	"	"	"	"	"	"
Cadmium	0.242	0.200	"	"	"	"	"	"
Copper	3.82	0.400	"	"	"	"	"	"
Lead	6.13	0.200	"	"	"	"	"	"
Nickel	4.51	0.400	"	"	"	"	"	"
Silver	0.0334	0.0200	"	"	"	"	"	"
Zinc	16.8	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	6880	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	182	0.0500	"	"	"	"	"	"	
Sodium	44.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.144	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 10:00**

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 - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-B@4'
2405043-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	87.9	%	1	BHE0106	05/03/24	05/03/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 10:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.271	0.0100	mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.02		pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-W@2.5'
2405043-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0340	85.1 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0390	97.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.81	70.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-W@2.5'
2405043-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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: **05/02/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0137	41.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0137	41.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 10:10**

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 - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-W@2.5'
2405043-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.19	0.200	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B	
Barium	47.1	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.50	0.400	"	"	"	"	"	"	
Lead	4.75	0.200	"	"	"	"	"	"	
Nickel	3.14	0.400	"	"	"	"	"	"	
Silver	0.0212	0.0200	"	"	"	"	"	"	
Zinc	13.2	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	319	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	58.5	0.0500	"	"	"	"	"	"	
Sodium	25.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.340	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Broomfield CO, 80020

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV01-W@2.5'
2405043-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	92.6			%	1	BHE0106	05/03/24	05/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.266	0.0100		mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 10:10**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.19			pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

Summit Scientific

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6855 W. 119th Ave.
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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV02-B@4'
2405043-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0335	83.7 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0370	92.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.67	69.4 %		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 - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV02-B@4'
2405043-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0154	46.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0151	45.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 10:20**

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 - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV02-B@4'
2405043-05 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.15	0.180	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B
Barium	145	0.360	"	"	"	"	"	"
Cadmium	0.262	0.180	"	"	"	"	"	"
Copper	3.91	0.360	"	"	"	"	"	"
Lead	6.50	0.180	"	"	"	"	"	"
Nickel	4.99	0.360	"	"	"	"	"	"
Silver	0.0396	0.0180	"	"	"	"	"	"
Zinc	16.9	0.360	"	"	"	"	"	"
Selenium	ND	0.234	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	55.8	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	13.8	0.0500	"	"	"	"	"	"	
Sodium	81.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.52	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
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Reported:
06/10/24 08:47

PWV02-B@4'
2405043-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	83.6	%	1	BHE0106	05/03/24	05/03/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.674	0.0100	mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 10:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.40		pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV02-W@2.5'
2405043-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0317	79.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.5 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.07	64.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV02-W@2.5'
2405043-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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	0.00697	0.00500	"	"	"	"	"	"	

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0135	40.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0165	49.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 10:25**

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV02-W@2.5'
2405043-06 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.20	0.200	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B
Barium	57.6	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.73	0.400	"	"	"	"	"	"
Lead	5.29	0.200	"	"	"	"	"	"
Nickel	3.51	0.400	"	"	"	"	"	"
Silver	0.0239	0.0200	"	"	"	"	"	"
Zinc	14.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	328	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	68.5	0.0500	"	"	"	"	"	"	
Sodium	24.3	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.319	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV02-W@2.5'
2405043-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	87.2			%	1	BHE0106	05/03/24	05/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.168	0.0100		mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 10:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.89			pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV03-B@4'
2405043-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0336	83.9 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0417	104 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.48	67.9 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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PWV03-B@4'
2405043-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0179	53.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0177	53.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 10:35**

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

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV03-B@4'
2405043-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.13	0.181	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B
Barium	67.3	0.362	"	"	"	"	"	"
Cadmium	0.217	0.181	"	"	"	"	"	"
Copper	4.55	0.362	"	"	"	"	"	"
Lead	7.18	0.181	"	"	"	"	"	"
Nickel	3.79	0.362	"	"	"	"	"	"
Silver	0.0306	0.0181	"	"	"	"	"	"
Zinc	16.5	0.362	"	"	"	"	"	"
Selenium	ND	0.236	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1040	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	52.9	0.0500	"	"	"	"	"	"	
Sodium	35.0	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.287	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A4002-ABN
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Reported:
06/10/24 08:47

PWV03-B@4'
2405043-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.7	%	1	BHE0106	05/03/24	05/03/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.254	0.0100	mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 10:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.52		pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV03-S@2.5'
2405043-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0349	87.2 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0375	93.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0409	102 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	8.14	65.1 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV03-S@2.5'
2405043-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0142	42.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0135	40.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV03-S@2.5'
2405043-10 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.07	0.200	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B
Barium	56.3	0.400	"	"	"	"	"	"
Cadmium	0.209	0.200	"	"	"	"	"	"
Copper	3.88	0.400	"	"	"	"	"	"
Lead	5.68	0.200	"	"	"	"	"	"
Nickel	3.42	0.400	"	"	"	"	"	"
Silver	0.0250	0.0200	"	"	"	"	"	"
Zinc	15.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	134	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	19.0	0.0500	"	"	"	"	"	"	
Sodium	4.02	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0861	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PWV03-S@2.5'
2405043-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	89.6	%	1	BHE0106	05/03/24	05/03/24	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 10:45**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.157	0.0100	mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 10:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

SEP01-DL@3'
2405043-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0339	84.8 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0368	92.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0388	97.1 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	110	50		mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.87	79.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

SEP01-DL@3'
2405043-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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: **05/02/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	43.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0155	46.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	2.66	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 12:05**

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

SEP01-DL@3'
2405043-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.21	0.200	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B	
Barium	66.5	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.79	0.400	"	"	"	"	"	"	
Lead	5.09	0.200	"	"	"	"	"	"	
Nickel	3.48	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	14.1	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	173	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	26.4	0.0500	"	"	"	"	"	"	
Sodium	220	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.12	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

SEP01-DL@3'
2405043-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	92.4			%	1	BHE0106	05/03/24	05/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.425	0.0100		mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.04			pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST01@0-6"
2405043-13 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0303	75.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0373	93.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.32	50.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST01@0-6"
2405043-13 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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	0.0101	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0218	0.00500	"	"	"	"	"	"	

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0205	61.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0209	62.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	2.73	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST01@0-6"
2405043-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.10	0.180	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B
Barium	49.3	0.360	"	"	"	"	"	"
Cadmium	ND	0.180	"	"	"	"	"	"
Copper	3.76	0.360	"	"	"	"	"	"
Lead	5.22	0.180	"	"	"	"	"	"
Nickel	3.20	0.360	"	"	"	"	"	"
Silver	0.0225	0.0180	"	"	"	"	"	"
Zinc	13.9	0.360	"	"	"	"	"	"
Selenium	ND	0.234	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	207	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	38.3	0.0500	"	"	"	"	"	"	
Sodium	77.7	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.30	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST01@0-6"
2405043-13 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	91.0			%	1	BHE0106	05/03/24	05/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.265	0.0100		mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	9.12			pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST02@0-6"
2405043-14 (Soil)

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Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHE0115	05/03/24	05/03/24	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: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0326	81.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0385	96.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0402	100 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHE0116	05/03/24	05/03/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	7.15	57.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST02@0-6"
2405043-14 (Soil)

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PAH by EPA Method 8270D SIM

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHE0100	05/03/24	05/06/24	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: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0189	56.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0197	59.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHE0155	05/06/24	06/06/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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6855 W. 119th Ave.
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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST02@0-6"
2405043-14 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.08	0.200	mg/kg dry	1	BHE0144	05/06/24	05/30/24	EPA 6020B
Barium	52.7	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.79	0.400	"	"	"	"	"	"
Lead	5.20	0.200	"	"	"	"	"	"
Nickel	3.43	0.400	"	"	"	"	"	"
Silver	0.0270	0.0200	"	"	"	"	"	"
Zinc	14.6	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHE0151	05/06/24	05/06/24	EPA 7196A	

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

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	189	0.0500	mg/L dry	1	BHE0229	05/07/24	05/08/24	EPA 6020B	
Magnesium	42.4	0.0500	"	"	"	"	"	"	
Sodium	25.2	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.431	0.00100	units	1	BHE0305	05/09/24	05/09/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

AST02@0-6"
2405043-14 (Soil)

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.9		%	1	BHE0106	05/03/24	05/03/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0944	0.0100	mmhos/cm	1	BHE0230	05/07/24	05/08/24	EPA 120.1	

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

Date Sampled: **05/02/24 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.53		pH Units	1	BHE0231	05/07/24	05/08/24	EPA 9045D	

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Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0115 - EPA 5030 Soil MS

Blank (BHE0115-BLK1)

Prepared & Analyzed: 05/03/24

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	"								
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0326		"	0.0400		81.4	50-150				
<i>Surrogate: Toluene-d8</i>	0.0380		"	0.0400		95.0	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0388		"	0.0400		96.9	50-150				

LCS (BHE0115-BS1)

Prepared & Analyzed: 05/03/24

Benzene	0.0939	0.0020	mg/kg	0.100		93.9	70-130				
Toluene	0.114	0.0050	"	0.100		114	70-130				
Ethylbenzene	0.116	0.0050	"	0.100		116	70-130				
m,p-Xylene	0.226	0.010	"	0.200		113	70-130				
o-Xylene	0.113	0.0050	"	0.100		113	70-130				
1,2,4-Trimethylbenzene	0.105	0.0050	"	0.100		105	70-130				
1,3,5-Trimethylbenzene	0.109	0.0050	"	0.100		109	70-130				
Naphthalene	0.0928	0.0038	"	0.100		92.8	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0366		"	0.0400		91.6	50-150				
<i>Surrogate: Toluene-d8</i>	0.0415		"	0.0400		104	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0411		"	0.0400		103	50-150				

Matrix Spike (BHE0115-MS1)

Source: 2405043-01

Prepared & Analyzed: 05/03/24

Benzene	0.0886	0.0020	mg/kg	0.100	ND	88.6	70-130				
Toluene	0.105	0.0050	"	0.100	ND	105	70-130				
Ethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130				
m,p-Xylene	0.209	0.010	"	0.200	ND	105	70-130				
o-Xylene	0.104	0.0050	"	0.100	ND	104	70-130				
1,2,4-Trimethylbenzene	0.0990	0.0050	"	0.100	ND	99.0	70-130				
1,3,5-Trimethylbenzene	0.0994	0.0050	"	0.100	ND	99.4	70-130				
Naphthalene	0.0970	0.0038	"	0.100	ND	97.0	70-130				
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0353		"	0.0400		88.3	50-150				
<i>Surrogate: Toluene-d8</i>	0.0417		"	0.0400		104	50-150				
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0414		"	0.0400		104	50-150				

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6855 W. 119th Ave.
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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BHE0115 - EPA 5030 Soil MS

Matrix Spike Dup (BHE0115-MSD1)	Source: 2405043-01			Prepared & Analyzed: 05/03/24						
Benzene	0.0939	0.0020	mg/kg	0.100	ND	93.9	70-130	5.82	30	
Toluene	0.114	0.0050	"	0.100	ND	114	70-130	8.15	30	
Ethylbenzene	0.113	0.0050	"	0.100	ND	113	70-130	5.70	30	
m,p-Xylene	0.224	0.010	"	0.200	ND	112	70-130	6.65	30	
o-Xylene	0.111	0.0050	"	0.100	ND	111	70-130	6.60	30	
1,2,4-Trimethylbenzene	0.102	0.0050	"	0.100	ND	102	70-130	3.31	30	
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130	6.46	30	
Naphthalene	0.102	0.0038	"	0.100	ND	102	70-130	5.15	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0335</i>		<i>"</i>	<i>0.0400</i>		<i>83.8</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0420</i>		<i>"</i>	<i>0.0400</i>		<i>105</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0402</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0116 - EPA 3550A

Blank (BHE0116-BLK1)

Prepared & Analyzed: 05/03/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	10.7		"	12.5		85.6	30-150				

LCS (BHE0116-BS1)

Prepared & Analyzed: 05/03/24

C10-C28 (DRO)	401	50	mg/kg	500		80.2	70-130				
Surrogate: <i>o</i> -Terphenyl	11.9		"	12.5		95.2	30-150				

Matrix Spike (BHE0116-MS1)

Source: 2405043-01

Prepared & Analyzed: 05/03/24

C10-C28 (DRO)	395	50	mg/kg	500	ND	79.0	70-130				
Surrogate: <i>o</i> -Terphenyl	8.80		"	12.5		70.4	30-150				

Matrix Spike Dup (BHE0116-MSD1)

Source: 2405043-01

Prepared & Analyzed: 05/03/24

C10-C28 (DRO)	433	50	mg/kg	500	ND	86.5	70-130	9.07	20		
Surrogate: <i>o</i> -Terphenyl	9.41		"	12.5		75.3	30-150				

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Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

PAH by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch BHE0100 - EPA 5030 Soil MS

Blank (BHE0100-BLK1)

Prepared: 05/03/24 Analyzed: 05/06/24

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0314</i>		"	<i>0.0333</i>		<i>94.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0333</i>		"	<i>0.0333</i>		<i>99.9</i>	<i>40-150</i>			

LCS (BHE0100-BS1)

Prepared: 05/03/24 Analyzed: 05/06/24

Acenaphthene	0.0230	0.00500	mg/kg	0.0333	69.1	31-137
Anthracene	0.0222	0.00500	"	0.0333	66.5	30-120
Benzo (a) anthracene	0.0216	0.00500	"	0.0333	64.7	30-120
Benzo (a) pyrene	0.0201	0.00500	"	0.0333	60.3	30-120
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	58.2	30-120
Benzo (k) fluoranthene	0.0237	0.00500	"	0.0333	71.2	30-120
Chrysene	0.0242	0.00500	"	0.0333	72.5	30-120
Dibenz (a,h) anthracene	0.0199	0.00500	"	0.0333	59.6	30-120
Fluoranthene	0.0231	0.00500	"	0.0333	69.2	30-120
Fluorene	0.0237	0.00500	"	0.0333	71.0	30-120
Indeno (1,2,3-cd) pyrene	0.0164	0.00500	"	0.0333	49.2	30-120
Pyrene	0.0265	0.00500	"	0.0333	79.5	35-142
1-Methylnaphthalene	0.0227	0.00500	"	0.0333	68.2	35-142
2-Methylnaphthalene	0.0237	0.00500	"	0.0333	71.0	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0259</i>		"	<i>0.0333</i>	<i>77.8</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0264</i>		"	<i>0.0333</i>	<i>79.3</i>	<i>40-150</i>

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Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0100 - EPA 5030 Soil MS

Matrix Spike (BHE0100-MS1)	Source: 2405043-01			Prepared: 05/03/24 Analyzed: 05/06/24						
Acenaphthene	0.0182	0.00500	mg/kg	0.0333	ND	54.7	31-137			
Anthracene	0.0199	0.00500	"	0.0333	ND	59.6	30-120			
Benzo (a) anthracene	0.0207	0.00500	"	0.0333	ND	62.0	30-120			
Benzo (a) pyrene	0.0185	0.00500	"	0.0333	ND	55.4	30-120			
Benzo (b) fluoranthene	0.0164	0.00500	"	0.0333	ND	49.3	30-120			
Benzo (k) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.6	30-120			
Chrysene	0.0200	0.00500	"	0.0333	ND	60.1	30-120			
Dibenz (a,h) anthracene	0.0199	0.00500	"	0.0333	ND	59.6	30-120			
Fluoranthene	0.0199	0.00500	"	0.0333	ND	59.6	30-120			
Fluorene	0.0194	0.00500	"	0.0333	ND	58.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0196	0.00500	"	0.0333	ND	58.7	30-120			
Pyrene	0.0228	0.00500	"	0.0333	ND	68.4	35-142			
1-Methylnaphthalene	0.0193	0.00500	"	0.0333	ND	58.0	15-130			
2-Methylnaphthalene	0.0206	0.00500	"	0.0333	ND	61.7	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0192</i>		<i>"</i>	<i>0.0333</i>		<i>57.7</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0210</i>		<i>"</i>	<i>0.0333</i>		<i>63.1</i>	<i>40-150</i>			

Matrix Spike Dup (BHE0100-MSD1)	Source: 2405043-01			Prepared: 05/03/24 Analyzed: 05/06/24						
Acenaphthene	0.0163	0.00500	mg/kg	0.0333	ND	48.9	31-137	11.2	30	
Anthracene	0.0173	0.00500	"	0.0333	ND	51.8	30-120	13.9	30	
Benzo (a) anthracene	0.0163	0.00500	"	0.0333	ND	48.8	30-120	23.8	30	
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.7	30-120	2.98	30	
Benzo (b) fluoranthene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	5.22	30	
Benzo (k) fluoranthene	0.0169	0.00500	"	0.0333	ND	50.7	30-120	3.75	30	
Chrysene	0.0157	0.00500	"	0.0333	ND	47.1	30-120	24.4	30	
Dibenz (a,h) anthracene	0.0187	0.00500	"	0.0333	ND	56.2	30-120	5.91	30	
Fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120	15.5	30	
Fluorene	0.0182	0.00500	"	0.0333	ND	54.5	30-120	6.76	30	
Indeno (1,2,3-cd) pyrene	0.0187	0.00500	"	0.0333	ND	56.0	30-120	4.69	30	
Pyrene	0.0184	0.00500	"	0.0333	ND	55.1	35-142	21.6	30	
1-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.9	15-130	9.70	50	
2-Methylnaphthalene	0.0230	0.00500	"	0.0333	ND	69.0	15-130	11.2	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0204</i>		<i>"</i>	<i>0.0333</i>		<i>61.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0180</i>		<i>"</i>	<i>0.0333</i>		<i>53.9</i>	<i>40-150</i>			

Summit Scientific

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

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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

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

Batch BHE0155 - EPA 3050B

Blank (BHE0155-BLK1)

Prepared: 05/06/24 Analyzed: 06/06/24

Boron ND 2.00 mg/L

LCS (BHE0155-BS1)

Prepared: 05/06/24 Analyzed: 06/06/24

Boron 5.07 2.00 mg/L 5.00 101 80-120

Duplicate (BHE0155-DUP1)

Source: 2405043-01

Prepared: 05/06/24 Analyzed: 06/06/24

Boron 0.287 2.00 mg/L 0.299 4.12 20

Matrix Spike (BHE0155-MS1)

Source: 2405043-01

Prepared: 05/06/24 Analyzed: 06/06/24

Boron 4.46 2.00 mg/L 4.97 0.299 83.7 75-125

Matrix Spike Dup (BHE0155-MSD1)

Source: 2405043-01

Prepared: 05/06/24 Analyzed: 06/06/24

Boron 4.35 2.00 mg/L 4.97 0.299 81.5 75-125 2.49 25

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHE0144 - EPA 3050B

Blank (BHE0144-BLK1)

Prepared: 05/06/24 Analyzed: 05/29/24

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 (BHE0144-BS1)

Prepared: 05/06/24 Analyzed: 05/29/24

Arsenic	40.5	0.200	mg/kg wet	40.0	101	80-120
Barium	38.7	0.400	"	40.0	96.7	80-120
Cadmium	1.94	0.200	"	2.00	97.0	80-120
Copper	41.1	0.400	"	40.0	103	80-120
Lead	19.2	0.200	"	20.0	96.1	80-120
Nickel	40.5	0.400	"	40.0	101	80-120
Silver	1.93	0.0200	"	2.00	96.6	80-120
Zinc	40.3	0.400	"	40.0	101	80-120
Selenium	3.89	0.260	"	4.00	97.3	80-120

Duplicate (BHE0144-DUP1)

Source: 2405041-01

Prepared: 05/06/24 Analyzed: 05/31/24

Arsenic	1.88	0.200	mg/kg dry	1.88	0.0645	20
Barium	1340	0.400	"	1290	4.06	20
Cadmium	0.417	0.200	"	0.391	6.49	20
Copper	10.7	0.400	"	11.7	9.45	20
Lead	10.8	0.200	"	9.58	11.8	20
Nickel	3.35	0.400	"	3.71	10.2	20
Silver	0.0285	0.0200	"	0.0335	16.2	20
Zinc	106	0.400	"	106	0.211	20
Selenium	ND	0.260	"	ND		20

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Broomfield CO, 80020

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0144 - EPA 3050B

Matrix Spike (BHE0144-MS1)

Source: 2405041-01

Prepared: 05/06/24 Analyzed: 05/31/24

Arsenic	24.3	0.180	mg/kg dry	37.8	1.88	59.3	75-125				QM-07
Barium	1220	0.360	"	37.8	1290	NR	75-125				QM-07
Cadmium	2.11	0.180	"	1.89	0.391	91.1	75-125				
Copper	30.4	0.360	"	37.8	11.7	49.4	75-125				QM-07
Lead	24.9	0.180	"	18.9	9.58	81.0	75-125				
Nickel	25.4	0.360	"	37.8	3.71	57.3	75-125				QM-07
Silver	1.78	0.0180	"	1.89	0.0335	92.0	75-125				
Zinc	131	0.360	"	37.8	106	65.9	75-125				QM-07
Selenium	3.65	0.234	"	3.78	ND	96.5	75-125				

Matrix Spike Dup (BHE0144-MSD1)

Source: 2405041-01

Prepared: 05/06/24 Analyzed: 05/31/24

Arsenic	24.2	0.180	mg/kg dry	37.8	1.88	59.0	75-125	0.507	25		QM-07
Barium	1220	0.360	"	37.8	1290	NR	75-125	0.0882	25		QM-07
Cadmium	2.16	0.180	"	1.89	0.391	93.6	75-125	2.28	25		
Copper	30.5	0.360	"	37.8	11.7	49.6	75-125	0.174	25		QM-07
Lead	25.3	0.180	"	18.9	9.58	82.9	75-125	1.40	25		
Nickel	25.4	0.360	"	37.8	3.71	57.4	75-125	0.0953	25		QM-07
Silver	1.80	0.0180	"	1.89	0.0335	93.5	75-125	1.50	25		
Zinc	131	0.360	"	37.8	106	66.5	75-125	0.186	25		QM-07
Selenium	3.82	0.234	"	3.78	ND	101	75-125	4.42	25		

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Wolfe USX CC07-16 FAC
Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHE0151 - 3060A Mod

Blank (BHE0151-BLK1)

Prepared & Analyzed: 05/06/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHE0151-BS1)

Prepared & Analyzed: 05/06/24

Chromium, Hexavalent 23.5 0.30 mg/kg wet 25.0 94.0 80-120

Duplicate (BHE0151-DUP1)

Source: 2405043-01

Prepared & Analyzed: 05/06/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHE0151-MS1)

Source: 2405043-01

Prepared & Analyzed: 05/06/24

Chromium, Hexavalent 27.7 0.30 mg/kg dry 28.5 ND 97.2 75-125

Matrix Spike Dup (BHE0151-MSD1)

Source: 2405043-01

Prepared & Analyzed: 05/06/24

Chromium, Hexavalent 27.7 0.30 mg/kg dry 28.5 ND 97.4 75-125 0.206 20

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Broomfield CO, 80020

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0229 - General Preparation

Blank (BHE0229-BLK1)

Prepared: 05/07/24 Analyzed: 05/08/24

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

LCS (BHE0229-BS1)

Prepared: 05/07/24 Analyzed: 05/08/24

Calcium	5.01	0.0500	mg/L wet	5.00	100	70-130
Magnesium	5.26	0.0500	"	5.00	105	70-130
Sodium	5.08	0.0500	"	5.00	102	70-130

Summit Scientific

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Broomfield CO, 80020

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0106 - General Preparation

Duplicate (BHE0106-DUP1)	Source: 2405033-01	Prepared & Analyzed: 05/03/24		
% Solids	81.2	% 82.6	1.70	20

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0230 - General Preparation

Blank (BHE0230-BLK1)

Prepared: 05/07/24 Analyzed: 05/08/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHE0230-BS1)

Prepared: 05/07/24 Analyzed: 05/08/24

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

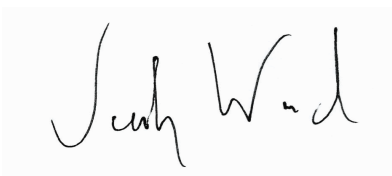
Duplicate (BHE0230-DUP1)

Source: 2405043-01

Prepared: 05/07/24 Analyzed: 05/08/24

Specific Conductance (EC) 0.266 0.0100 mmhos/cm 0.271 2.05 20

Summit Scientific



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

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

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 BHE0231 - General Preparation

LCS (BHE0231-BS1)

Prepared: 05/07/24 Analyzed: 05/08/24

pH	9.04	pH Units	9.18	98.5	95-105
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Duplicate (BHE0231-DUP1)

Source: 2405043-01

Prepared: 05/07/24 Analyzed: 05/08/24

pH	8.93	pH Units	9.02	1.00	20
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Summit Scientific



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

Project: Noble - Wolfe USX CC07-16 FAC

Project Number: UWRWE-A4002-ABN
Project Manager: Jacob Whritenour

Reported:
06/10/24 08:47

Notes and Definitions

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.

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