

Third Party																		
Removal Date																		
Sample taken?																		
PID Readings																		
Photo Number(s)																		
Other Facility Equipment																		
Equipment type	Meter House																	
Equipment Condition	Good																	
Age																		
Soil impacts observed during	None observed																	
PID Readings	0.0																	
Sample taken?	Yes, see below																	
Photo Number(s)	9																	
Other observations regarding other facility or third party equipment:																		
Sample taken below meter house. (MH01@0.5')																		
Summary																		
Was impacted soil identified?																		
No		Yes - less than 10 cubic yards				Yes - more than 10 cubic yards												
Total number of samples field screened: 11					Total number of samples collected: 11													
Highest PID Reading: 0.2					Total number of samples submitted to lab for analysis: 10													
If more than 10 cubic yards of impacted soil were observed:																		
Vertical extent:					Estimated spill volume:													
Lateral extent:					Volume of soil removed:													
Is additional investigation required?																		
Was groundwater encountered during the investigation?																		
No		Yes - not impacted or in contact with impacted soils				Yes - groundwater impacted and/or in contact with impacted soils												
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes No													
Date Groundwater was encountered:					Commencement date of removal:													
Sheen on groundwater?		Yes	No		Volume of groundwater removed prior to sampling:													
Free product observed?		Yes	No		Volume of groundwater removed post sampling:													
Total number of samples collected:					Total Volume of groundwater removed:													
Total number of samples submitted to lab for analysis:																		

Photographic Log


Equipment ID:SS03@2.5'

Equipment Type:Partially Buried Vault

Material:Concrete

Volume:
Contents:Produced Water

Notes/Conditions:

Equipment ID:SS04@2.5'



Equipment Type:Partially Buried Vault

Material:Concrete


Volume:
Contents:Produced Water

Notes/Conditions:

Photographic Log

																	
Equipment ID: FS01 @5'			Equipment Type: Partially Buried Vault			Equipment ID: AST01 @0.5'			Equipment Type: Above Ground Storage Tank								
Material: Concrete			Volume:			Contents: Produced Water			Material: Steel			Volume:			Contents: Crude Oil		
Notes/Conditions:									Notes/Conditions:								


Photographic Log

							
Equipment ID: AST02@0.5'		Equipment Type: Above Ground Storage Tank		Equipment ID: AST03@0.5'		Equipment Type: Above Ground Storage Tank	
Material: Steel		Volume:		Contents: Crude Oil		Material: Steel	
Volume:		Contents: Crude Oil		Volume:		Contents: Crude Oil	
Notes/Conditions:				Notes/Conditions:			

Photographic Log

									
						Equipment ID:		Equipment Type:	
						Material:	Volume:	Contents:	
						Notes/Conditions:			
Equipment ID: MH01 @ 0.5'		Equipment Type:							
Material:		Volume:	Contents:						
Notes/Conditions: Meter house moved prior. Sample at inlet									

Photographic Log



											
Equipment ID: SEP01-FL@3';		Equipment Type: Flowline		Equipment ID: SEP01-DL@3'		Equipment Type: Dump Line					
Material: Concrete		Volume:		Contents: Oil/Gas/Water		Material: Steel		Volume:		Contents: Oil/Gas/Water	
Notes/Conditions:						Notes/Conditions:					

Photographic Log





Equipment ID: BG01@2.5'		Equipment Type:		Equipment ID: BG02@3'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			



Photographic Log

					
Equipment ID: BG02		Equipment Type:			
Material:	Volume:	Contents:			
Notes/Conditions: Hand auger sample location BG02 at 3.5' and 5'.					
Equipment ID: BG03		Equipment Type:			
Material:	Volume:	Contents:			
Notes/Conditions: Hand auger sample location BG03 at 3.5' and 5'.					



Photographic Log

					
Equipment ID: BG04		Equipment Type:			
Material:	Volume:	Contents:			
Notes/Conditions: Hand auger sample location BG04 at 3.5' and 5'.					
Equipment ID: BG05		Equipment Type:			
Material:	Volume:	Contents:			
Notes/Conditions: Hand auger sample location BG05 at 3.5' and 5'.					

Photographic Log

											
Equipment ID: BG06		Equipment Type:		Equipment ID: BH01		Equipment Type:					
Material:		Volume:		Contents:		Material:		Volume:		Contents:	
Notes/Conditions: Hand auger sample location BG06 at 3.5' and 5'.						Notes/Conditions: Hand auger sample location BH01 at 3' and 5'.					

Photographic Log

											
Equipment ID: BH02		Equipment Type:		Equipment ID: BH03		Equipment Type:					
Material:		Volume:		Contents:		Material:		Volume:		Contents:	
Notes/Conditions: Hand auger sample location BH02 at 3' and 5'.						Notes/Conditions: Hand auger sample location BH03 at 3' and 5'.					

Photographic Log


									
Equipment ID: BH04		Equipment Type:		Equipment ID: BH05		Equipment Type:			
Material:		Volume:		Material:		Volume:		Contents:	
Notes/Conditions: Hand auger sample location BH04 at 3' and 5'.				Notes/Conditions: Hand auger sample location BH05 at 3' and 5'.					

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - LILLI UNIT O-5

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
AST01@0.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68544223	-103.8835877	1.3
AST02@0.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68548585	-103.8836106	1.1
SS01@2.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68555234	-103.8835192	1.2
SS02@2.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68552779	-103.8835042	1.1
SS03@2.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68550869	-103.8835390	1.1
FS01@3.5'	05/03/22	0.3	Organic Content	No Odor	Lab	40.68553676	-103.8835258	1.1
SS04@2.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68554194	-103.8835572	1.2
SEP01-DL@3'	05/03/22	1.0	Organic Content	No Odor	Lab	40.68587616	-103.8835519	1.3
SEP01-FL@3'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68586393	-103.8835129	1.2
MH01@0.5'	05/03/22	0.0	Organic Content	No Odor	Grab	40.68589460	-103.8835127	1.1
AST03@0.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68552540	-103.8835821	1.2
BH01@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68585115	-103.8834956	1.2
BH02@3'	08/10/22	0.0	No Staining	No Odor	Lab	40.68591909	-103.8834987	1.2
BH02@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68591909	-103.8834987	1.2
BH03@3'	08/10/22	0.0	No Staining	No Odor	Lab	40.68585570	-103.8834223	1.2
BH03@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68585570	-103.8834223	1.2
BH04@3'	08/10/22	0.0	No Staining	No Odor	Lab	40.68580379	-103.8834952	1.3
BH04@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68580379	-103.8834952	1.3
BH05@3'	08/10/22	0.0	No Staining	No Odor	Lab	40.68586359	-103.8835733	1.3
BH05@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68586359	-103.8835733	1.3
BG01@2.5'	05/03/22	0.0	Organic Content	No Odor	Lab	40.68568367	-103.8839246	1.1
BG02@3.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68616516	-103.8834106	1.2
BG02@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68616516	-103.8834106	1.2
BG03@3.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68616718	-103.8833512	1.1
BG03@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68616718	-103.8833512	1.1
BG04@3.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68616165	-103.8832911	1.1
BG04@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68616165	-103.8832911	1.1
BG05@3.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68612468	-103.8833756	1.0
BG05@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68612468	-103.8833756	1.0
BG06@3.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68612898	-103.8833196	1.0
BG06@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.68612898	-103.8833196	1.0

Notes:

PID = Photo-ionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

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

TABLE 2
SOIL ANALYTICAL DATA
NOBLE ENERGY, INC. - LILLI UNIT O-5

Soil Sample ID	Date	¹ Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL ²		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL ^{2,3}		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SS01@2.5'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS02@2.5'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS03@2.5'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS04@2.5'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS01@3.5'	05/03/22	<0.0020	<0.0050	<0.0050	0.023	0.027	0.0078	0.0070	0.62	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST01@0.5'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST02@0.5'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST03@0.5'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01-FL@3'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01-DL@3'	05/03/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0050	<0.50	51	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
SS01@2.5'	05/03/22	7.77	2.90	2.750	0.1460
SS02@2.5'	05/03/22	8.24	2.21	0.564	NA
SS03@2.5'	05/03/22	8.12	1.40	0.542	NA
SS04@2.5'	05/03/22	8.18	2.50	0.689	NA
FS01@3.5'	05/03/22	7.91	1.49	1.220	0.0837
AST01@0.5'	05/03/22	8.29	3.83	0.505	0.0915
AST02@0.5'	05/03/22	7.75	2.12	2.320	0.0659
AST03@0.5'	05/03/22	8.00	1.38	0.530	0.0945
SEP01-FL@3'	05/03/22	8.17	6.18	1.200	0.2260
SEP01-DL@3'	05/03/22	8.15	2.87	0.779	0.0765
BH01@5'	08/10/22	NA	0.604	NA	NA
BH02@3'	08/10/22	NA	2.54	NA	NA
BH02@5'	08/10/22	NA	4.37	NA	NA
BH03@3'	08/10/22	NA	2.61	NA	NA
BH03@5'	08/10/22	NA	8.84	NA	NA
BH04@3'	08/10/22	NA	5.54	NA	NA
BH04@5'	08/10/22	NA	7.41	NA	NA
BH05@3'	08/10/22	NA	2.13	NA	NA
BH05@5'	08/10/22	NA	1.63	NA	NA
BG01@2.5'	05/03/22	NA	4.46	NA	NA
BG01@3.5'	05/03/22	NA	5.02	NA	NA
BG02@3.5'	08/10/22	NA	4.03	NA	NA
BG02@5'	08/10/22	NA	10.0	NA	NA
BG03@3.5'	08/10/22	NA	4.67	NA	NA
BG03@5'	08/10/22	NA	8.61	NA	NA
BG04@3.5'	08/10/22	NA	5.60	NA	NA
BG04@5'	08/10/22	NA	7.52	NA	NA
BG05@3.5'	08/10/22	NA	2.97	NA	NA
BG05@5'	08/10/22	NA	5.52	NA	NA
BG06@3.5'	08/10/22	NA	4.58	NA	NA
BG06@5'	08/10/22	NA	6.63	NA	NA

Soil Sample ID	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ²		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
FS01@3.5'	05/03/22	4.10	252	<0.269	<0.30	7.29	13.7	5.41	1.020	0.0579	23.5
BG01@3.5'	05/03/22	3.26	192	<0.249	<0.30	7.20	12.8	5.70	0.971	0.0593	24.6
BG02@3.5'	08/10/22	2.49	183	NA	NA	NA	NA	NA	0.710	NA	NA
BG02@5'	08/10/22	3.84	269	NA	NA	NA	NA	NA	0.844	NA	NA
BG03@3.5'	08/10/22	3.14	262	NA	NA	NA	NA	NA	0.675	NA	NA
BG03@5'	08/10/22	3.38	218	NA	NA	NA	NA	NA	0.808	NA	NA
BG04@3.5'	08/10/22	2.95	312	NA	NA	NA	NA	NA	0.708	NA	NA
BG04@5'	08/10/22	3.36	258	NA	NA	NA	NA	NA	0.744	NA	NA
BG05@3.5'	08/10/22	3.62	217	NA	NA	NA	NA	NA	0.697	NA	NA
BG05@5'	08/10/22	3.08	247	NA	NA	NA	NA	NA	0.691	NA	NA
BG06@3.5'	08/10/22	3.02	558	NA	NA	NA	NA	NA	0.757	NA	NA
BG06@5'	08/10/22	2.80	248	NA	NA	NA	NA	NA	0.725	NA	NA

Notes:

- Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
- Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs)
- SSLs are applicable if a pathway for communication with groundwater is present.

Definitions:

COGCC = Colorado Oil and Gas Conservation Commission

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

mmhos/cm = Millmhos per centimeter

mg/L = Milligrams per liter

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

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

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

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

Benzo(a) = Benzanthracene

Benzo(b) = Benzo(a)fluoranthene

Benzo(k) = Benzo(a)fluoranthene

Benzo(a) = Benzopyrene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene

NA = Not Analyzed

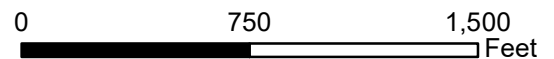
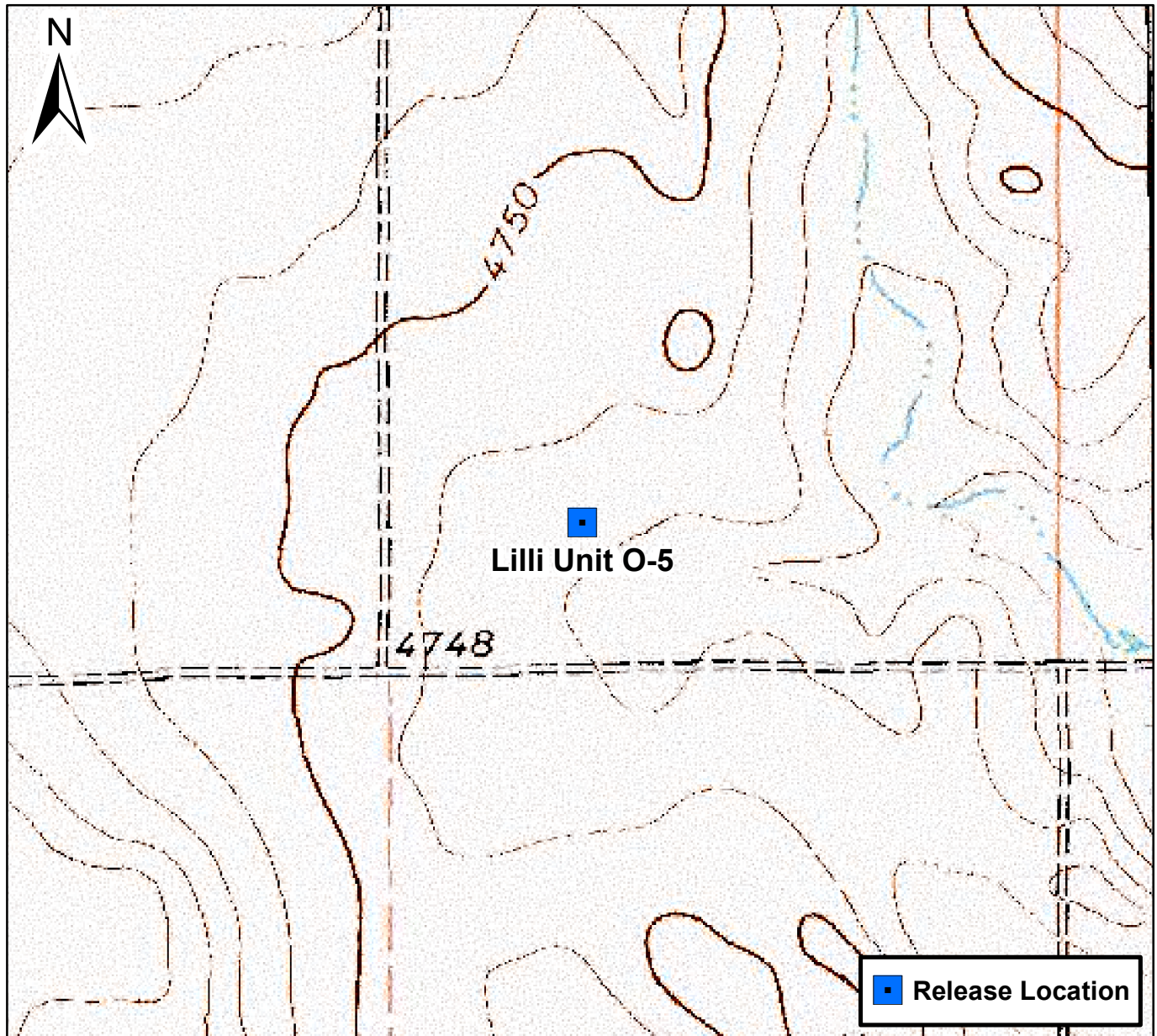
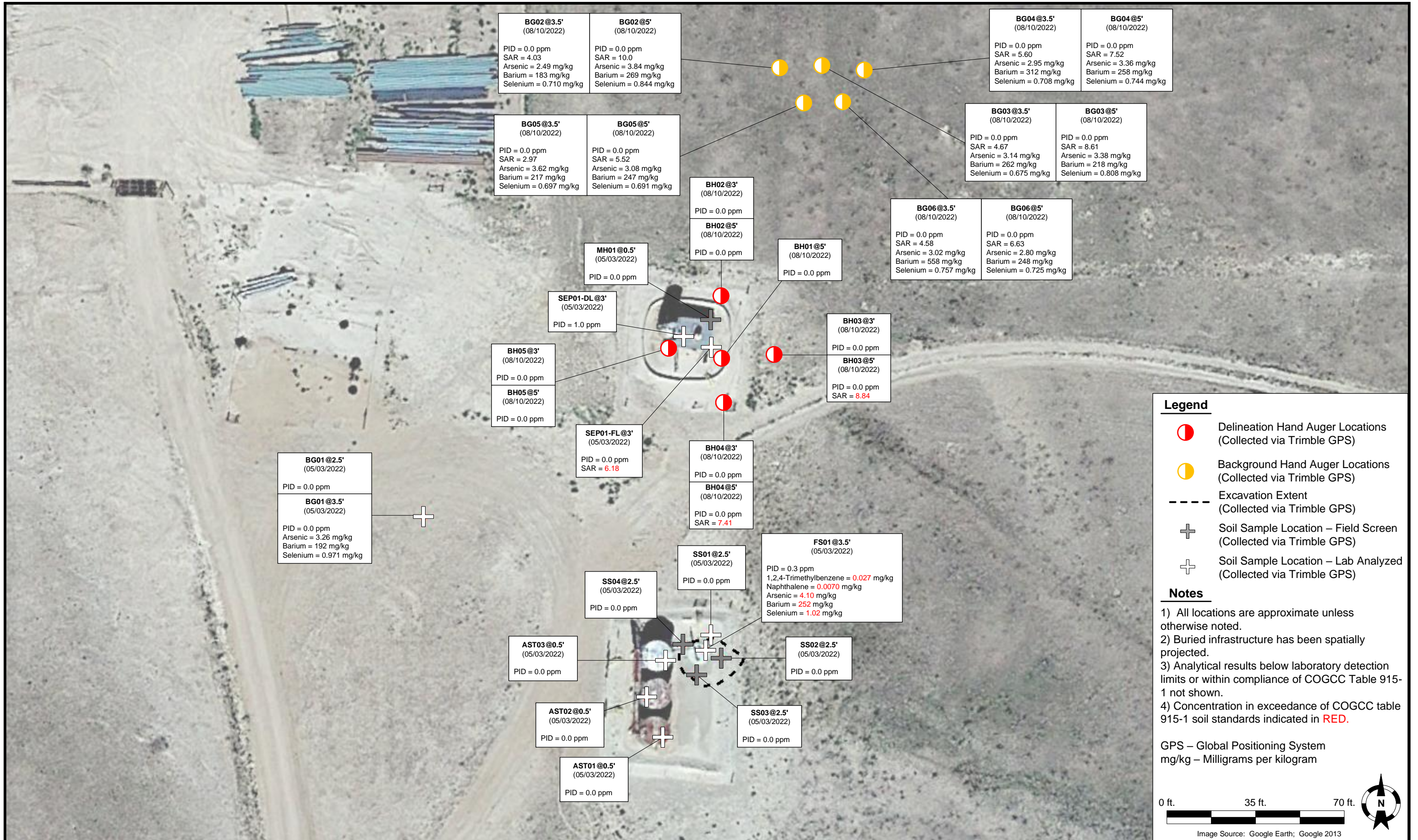


Figure 1

Site Location Map
Lilli Unit O-5
SWSE S5 T8N R58W
Weld County, Colorado





Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 01, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Lilli Unit 0-5 Fac

Work Order #2205034

Enclosed are the results of analyses for samples received by Summit Scientific on 05/03/22 17:36. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Muri Premier", is displayed on a light purple rectangular background.

Muri Premier For Paul Shrewsbury
President



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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@2.5'	2205034-01	Soil	05/03/22 14:25	05/03/22 17:36
SS02@2.5'	2205034-02	Soil	05/03/22 14:30	05/03/22 17:36
SS03@2.5'	2205034-03	Soil	05/03/22 14:35	05/03/22 17:36
SS04@2.5'	2205034-04	Soil	05/03/22 14:40	05/03/22 17:36
FS01@3.5'	2205034-05	Soil	05/03/22 14:45	05/03/22 17:36
AST01@0.5'	2205034-06	Soil	05/03/22 14:10	05/03/22 17:36
AST02@0.5'	2205034-07	Soil	05/03/22 14:15	05/03/22 17:36
AST03@0.5'	2205034-08	Soil	05/03/22 14:20	05/03/22 17:36
SEP01-FL@3'	2205034-09	Soil	05/03/22 14:55	05/03/22 17:36
SEP01-DL@3'	2205034-10	Soil	05/03/22 14:50	05/03/22 17:36
BG01@2.5'	2205034-11	Soil	05/03/22 14:58	05/03/22 17:36
BG01@3.5'	2205034-12	Soil	05/03/22 14:58	05/03/22 17:36

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.

Summit Scientific

 S_2

2205034.1

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310

Page 1 of 2

Client: Noble / Tasman

Project Manager: Jake Whritenour, Invoice: Wade firestien

Address: 6855 W. 119th Ave

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield/ CO/ 80020

Phone: 303-261-6246

Project Name: Unit 0-5 FAC

Sampler Name: Stanley Gilbert

Project Number: UWRWE - A2632-ABN

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other _____	Water	Soil	Air-Canister #	Other _____	VOC - 915	TPH - 915	PAH - 915	SAR, EC, PH	Boron - HWS	HOLD				SAR,EC,PH By saturated paste
1	SS01G 2.5'	5/3/22	14:25	2			X			X			X	X	X	X	X					
2	SS02G 2.5'		14:30				X			X			X	X	X	X	X	X				HOLD
3	SS03G 2.5'		14:35				X			X			X	X	X	X	X	X				HOLD
4	SS04G 2.5'		14:40				X			X			X	X	X	X	X	X				HOLD
5	F001G 3.5'		14:45				X			X			X	X	X	X	X	X				
6	AST01G 0.5'		14:10				X			X			X	X	X	X	X	X				
7	AST02G 0.5'		14:15				X			X			X	X	X	X	X	X				
8	AST03G 0.5'		14:20				X			X			X	X	X	X	X	X				
9	SEP01-FLG3'		14:55				X			X			X	X	X	X	X	X				
10	SEP01-DLG3'		14:50				X			X			X	X	X	X	X	X				
Relinquished by:		Date/Time:		Received by:		Date/Time:		Turn Around Time		(Check)		Notes:										
[Signature]		5/3/22 17:36		Tasman's Lock Box		5/3/22 17:36		Same Day		72 hours												
Relinquished by:		Date/Time:		Received by:		Date/Time:		24 hours		Standard		X										
Tasman's Lock Box		5/3/22 1736		[Signature]		5/3/22 1736		48 hours														
Relinquished by:		Date/Time:		Received by:		Date/Time:		Sample Integrity:														
								Temperature Upon Receipt:		7.0												
								Samples Intact:		Yes No												

Summit Scientific

S₂

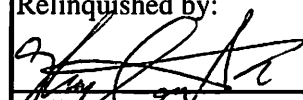
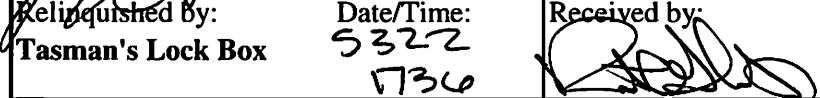
2205034.2

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 2 of 2

Client: Noble / Tasman Project Manager: Jake Whritenour, Invoice: Wade firestien
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield/ CO/ 80020
Phone: 303-261-6246 Project Name: LILLI Unit B-5 FAC
Sampler Name: Stanley Gilbert Project Number: UWRWE-A1632-ABN

					Preservative				Matrix				Analysis Requested							Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	SAR, EC, PH	Boron - HWS	HOLD		SAR, EC, PH By saturated paste
1	BG016 2.5'	5/3/22	14:58	1			X			X			X	X	X	X	X	X		HOLD
2	BG016 3.5'	↓	14:58	1			X			X			X	X	X	X	X	X		HOLD
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished by: 	Date/Time: 5/3/22 17:36	Received by: Tasman's Lock Box	Date/Time: 5/3/22 17:36	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/> 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: <u>7.0</u> Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 5/3/22 1736	Received by: 	Date/Time: 5/3/22 1736		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2205034

Client: Noddy Island Client Project ID: Lilli Unit 0-5 FAC

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

	-			
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 7.0 Thermometer # 1

	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.	-			on ICE
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples due within 48 hours present?		-		
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			-	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
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.			-	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	

Additional Comments (if any):

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


Custodian Printed Name

5322

Date/Time



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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS01@2.5'
2205034-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0065	05/04/22	05/05/22	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: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		94.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0066	05/04/22	05/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS01@2.5'
2205034-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0060	05/04/22	05/05/22	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: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		41.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		41.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.146	0.0100	mg/L	1	BFE0161	05/09/22	05/16/22	EPA 6020B	

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

Date Sampled: **05/03/22 14:25**

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS01@2.5'
2205034-01 (Soil)

Summit Scientific

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

Calcium	227	0.0685	mg/L dry	1	BFE0167	05/09/22	05/16/22	EPA 6020B
Magnesium	59.9	0.0685	"	"	"	"	"	"
Sodium	190	0.0685	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.90	0.00100	units	1	BFE0308	05/16/22	05/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.0		%	1	BFE0067	05/04/22	05/04/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.75	0.0100	mmhos/cm	1	BFE0193	05/10/22	05/10/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BFE0194	05/10/22	05/10/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS02@2.5'
2205034-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0341	05/17/22	05/18/22	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: **05/03/22 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		99.5 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0342	05/17/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		104 %	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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS02@2.5'
2205034-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0344	05/17/22	05/18/22	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: **05/03/22 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.8 %	40-150		"	"	"	"	

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

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	606	0.0637	mg/L dry	1	BFE0497	05/23/22	05/27/22	EPA 6020B	
Magnesium	136	0.0637	"	"	"	"	"	"	
Sodium	231	0.0637	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS02@2.5'
2205034-02 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.21	0.00100	units	1	BFE0647	05/27/22	05/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.5		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.564	0.0100	mmhos/cm	1	BFE0499	05/23/22	05/24/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.24		pH Units	1	BFE0498	05/23/22	05/24/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS03@2.5'
2205034-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0341	05/17/22	05/18/22	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: **05/03/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0342	05/17/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		98.7 %	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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS03@2.5'
2205034-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0344	05/17/22	05/18/22	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: **05/03/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		60.4 %	40-150		"	"	"	"	

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

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	841	0.0723	mg/L dry	1	BFE0497	05/23/22	05/27/22	EPA 6020B	
Magnesium	167	0.0723	"	"	"	"	"	"	
Sodium	170	0.0723	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS03@2.5'
2205034-03 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.40	0.00100	units	1	BFE0647	05/27/22	05/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	69.2		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.542	0.0100	mmhos/cm	1	BFE0499	05/23/22	05/24/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BFE0498	05/23/22	05/24/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS04@2.5'
2205034-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0341	05/17/22	05/17/22	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: **05/03/22 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.9 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0342	05/17/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		98.2 %	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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS04@2.5'
2205034-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0344	05/17/22	05/18/22	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: **05/03/22 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		63.0 %	40-150		"	"	"	"	

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

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1000	0.0636	mg/L dry	1	BFE0497	05/23/22	05/27/22	EPA 6020B	
Magnesium	180	0.0636	"	"	"	"	"	"	
Sodium	327	0.0636	"	"	"	"	"	"	

Calculated Analysis

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SS04@2.5'
2205034-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.50	0.00100	units	1	BFE0647	05/27/22	05/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	78.6		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.689	0.0100	mmhos/cm	1	BFE0499	05/23/22	05/24/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.18		pH Units	1	BFE0498	05/23/22	05/24/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

FS01@3.5'
2205034-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0065	05/04/22	05/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.023	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.027	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.0078	0.0050	"	"	"	"	"	"	
Naphthalene	0.0070	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.62	0.50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0066	05/04/22	05/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		104 %	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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

FS01@3.5'
2205034-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0060	05/04/22	05/05/22	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: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		60.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		55.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0837	0.0100	mg/L	1	BFE0161	05/09/22	05/16/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/03/22 14:45**

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

FS01@3.5'
2205034-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.10	0.269	mg/kg dry	1	BFE0430	05/19/22	05/25/22	EPA 6020B
Barium	252	0.538	"	"	"	"	"	"
Cadmium	ND	0.269	"	"	"	"	"	"
Copper	7.29	0.538	"	"	"	"	"	"
Lead	13.7	0.269	"	"	"	"	"	"
Nickel	5.41	0.538	"	"	"	"	"	"
Selenium	1.02	0.350	"	"	"	"	"	"
Silver	0.0579	0.0269	"	"	"	"	"	"
Zinc	23.5	0.538	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0492	05/23/22	05/23/22	EPA 7196A	

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

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	89.7	0.0673	mg/L dry	1	BFE0167	05/09/22	05/16/22	EPA 6020B	
Magnesium	21.0	0.0673	"	"	"	"	"	"	
Sodium	60.1	0.0673	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.49	0.00100	units	1	BFE0308	05/16/22	05/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:45**

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

FS01@3.5'
2205034-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	74.3	%	1	BFE0067	05/04/22	05/04/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.22	0.0100	mmhos/cm	1	BFE0193	05/10/22	05/10/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.91		pH Units	1	BFE0194	05/10/22	05/10/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST01@0.5'
2205034-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0065	05/04/22	05/05/22	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: **05/03/22 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		95.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0066	05/04/22	05/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		107 %	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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST01@0.5'
2205034-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0060	05/04/22	05/05/22	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: **05/03/22 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		50.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0915	0.0100	mg/L	1	BFE0161	05/09/22	05/16/22	EPA 6020B	

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

Date Sampled: **05/03/22 14:10**

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST01@0.5'
2205034-06 (Soil)

Summit Scientific

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

Calcium	10.3	0.0571	mg/L dry	1	BFE0167	05/09/22	05/16/22	EPA 6020B
Magnesium	2.98	0.0571	"	"	"	"	"	"
Sodium	54.2	0.0571	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.83	0.00100	units	1	BFE0308	05/16/22	05/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.6		%	1	BFE0067	05/04/22	05/04/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.505	0.0100	mmhos/cm	1	BFE0193	05/10/22	05/10/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.29		pH Units	1	BFE0194	05/10/22	05/10/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST02@0.5'
2205034-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0065	05/04/22	05/05/22	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: **05/03/22 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		97.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		99.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0066	05/04/22	05/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		97.4 %	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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST02@0.5'
2205034-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0060	05/04/22	05/05/22	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: **05/03/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		48.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0659	0.0100	mg/L	1	BFE0161	05/09/22	05/16/22	EPA 6020B	

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

Date Sampled: **05/03/22 14:15**

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST02@0.5'
2205034-07 (Soil)

Summit Scientific

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

Calcium	146	0.0595	mg/L dry	1	BFE0167	05/09/22	05/16/22	EPA 6020B
Magnesium	24.5	0.0595	"	"	"	"	"	"
Sodium	105	0.0595	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.12	0.00100	units	1	BFE0308	05/16/22	05/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.0		%	1	BFE0067	05/04/22	05/04/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.32	0.0100	mmhos/cm	1	BFE0193	05/10/22	05/10/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.75		pH Units	1	BFE0194	05/10/22	05/10/22	EPA 9045D	

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Tasman Geosciences
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Broomfield CO, 80020

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST03@0.5'
2205034-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0065	05/04/22	05/05/22	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: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0066	05/04/22	05/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		98.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST03@0.5'
2205034-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0060	05/04/22	05/05/22	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: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		49.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0945	0.0100	mg/L	1	BFE0161	05/09/22	05/16/22	EPA 6020B	

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

Date Sampled: **05/03/22 14:20**

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

AST03@0.5'
2205034-08 (Soil)

Summit Scientific

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

Calcium	29.5	0.0602	mg/L dry	1	BFE0167	05/09/22	05/16/22	EPA 6020B
Magnesium	5.90	0.0602	"	"	"	"	"	"
Sodium	31.5	0.0602	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.38	0.00100	units	1	BFE0308	05/16/22	05/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	83.0		%	1	BFE0067	05/04/22	05/04/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.530	0.0100	mmhos/cm	1	BFE0193	05/10/22	05/10/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BFE0194	05/10/22	05/10/22	EPA 9045D	

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SEP01-FL@3'
2205034-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0065	05/04/22	05/05/22	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: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		99.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0066	05/04/22	05/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		103 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SEP01-FL@3'
2205034-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0060	05/04/22	05/05/22	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: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		42.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.226	0.0100	mg/L	1	BFE0161	05/09/22	05/16/22	EPA 6020B	

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

Date Sampled: **05/03/22 14:55**

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SEP01-FL@3'
2205034-09 (Soil)

Summit Scientific

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

Calcium	21.4	0.0661	mg/L dry	1	BFE0167	05/09/22	05/16/22	EPA 6020B
Magnesium	10.3	0.0661	"	"	"	"	"	"
Sodium	139	0.0661	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.18	0.00100	units	1	BFE0308	05/16/22	05/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.6		%	1	BFE0067	05/04/22	05/04/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.20	0.0100	mmhos/cm	1	BFE0193	05/10/22	05/10/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.17		pH Units	1	BFE0194	05/10/22	05/10/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SEP01-DL@3'
2205034-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0065	05/04/22	05/05/22	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: **05/03/22 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		99.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		99.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	51	50	mg/kg	1	BFE0066	05/04/22	05/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SEP01-DL@3'
2205034-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0060	05/04/22	05/05/22	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: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		44.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		59.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0765	0.0100	mg/L	1	BFE0161	05/09/22	05/16/22	EPA 6020B	

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

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

SEP01-DL@3'
2205034-10 (Soil)

Summit Scientific

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

Calcium	29.0	0.0654	mg/L dry	1	BFE0167	05/09/22	05/16/22	EPA 6020B
Magnesium	10.8	0.0654	"	"	"	"	"	"
Sodium	71.3	0.0654	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.87	0.00100	units	1	BFE0308	05/16/22	05/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.4		%	1	BFE0067	05/04/22	05/04/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.779	0.0100	mmhos/cm	1	BFE0193	05/10/22	05/10/22	EPA 120.1	

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

Date Sampled: **05/03/22 14:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15		pH Units	1	BFE0194	05/10/22	05/10/22	EPA 9045D	

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Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

BG01@2.5'
2205034-11 (Soil)

Summit Scientific

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

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	471	0.0585	mg/L dry	1	BFE0497	05/23/22	05/27/22	EPA 6020B	
Magnesium	63.7	0.0585	"	"	"	"	"	"	
Sodium	389	0.0585	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.46	0.00100	units	1	BFE0647	05/27/22	05/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.5		%	1	BFE0607	05/26/22	05/27/22	Calculation	

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Broomfield CO, 80020

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

BG01@3.5'
2205034-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.26	0.249	mg/kg dry	1	BFE0430	05/19/22	05/25/22	EPA 6020B	
Barium	192	0.497	"	"	"	"	"	"	
Cadmium	ND	0.249	"	"	"	"	"	"	
Copper	7.20	0.497	"	"	"	"	"	"	
Lead	12.8	0.249	"	"	"	"	"	"	
Nickel	5.70	0.497	"	"	"	"	"	"	
Selenium	0.971	0.323	"	"	"	"	"	"	
Silver	0.0593	0.0249	"	"	"	"	"	"	
Zinc	24.6	0.497	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0492	05/23/22	05/23/22	EPA 7196A	

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

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	475	0.0621	mg/L dry	1	BFE0497	05/23/22	05/27/22	EPA 6020B	
Magnesium	63.9	0.0621	"	"	"	"	"	"	
Sodium	439	0.0621	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	5.02	0.00100	units	1	BFE0647	05/27/22	05/27/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Tasman Geosciences
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Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

BG01@3.5'
2205034-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/03/22 14:58**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	80.5			%	1	BFE0607	05/26/22	05/27/22	Calculation	

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Tasman Geosciences
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Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFE0065 - EPA 5030 Soil MS

Blank (BFE0065-BLK1)

Prepared & Analyzed: 05/04/22

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	0.0377		"	0.0400		94.2	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0400		91.5	50-150			

LCS (BFE0065-BS1)

Prepared & Analyzed: 05/04/22

Benzene	0.0608	0.0020	mg/kg	0.0750		81.0	70-130			
Toluene	0.0640	0.0050	"	0.0750		85.3	70-130			
Ethylbenzene	0.0588	0.0050	"	0.0750		78.4	70-130			
m,p-Xylene	0.137	0.010	"	0.150		91.2	70-130			
o-Xylene	0.0660	0.0050	"	0.0750		88.0	70-130			
1,2,4-Trimethylbenzene	0.0629	0.0050	"	0.0750		83.9	70-130			
1,3,5-Trimethylbenzene	0.0608	0.0050	"	0.0750		81.0	70-130			
Naphthalene	0.0674	0.0038	"	0.0750		89.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0353		"	0.0400		88.3	50-150			
Surrogate: Toluene-d8	0.0395		"	0.0400		98.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.6	50-150			

Matrix Spike (BFE0065-MS1)

Source: 2205024-01

Prepared & Analyzed: 05/04/22

Benzene	0.0680	0.0020	mg/kg	0.0750	ND	90.6	70-130			
Toluene	0.0722	0.0050	"	0.0750	ND	96.2	70-130			
Ethylbenzene	0.0650	0.0050	"	0.0750	ND	86.7	70-130			
m,p-Xylene	0.152	0.010	"	0.150	ND	101	70-130			
o-Xylene	0.0718	0.0050	"	0.0750	ND	95.8	70-130			
1,2,4-Trimethylbenzene	0.0704	0.0050	"	0.0750	ND	93.8	70-130			
1,3,5-Trimethylbenzene	0.0673	0.0050	"	0.0750	ND	89.7	70-130			
Naphthalene	0.0792	0.0038	"	0.0750	ND	106	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0379		"	0.0400		94.6	50-150			
Surrogate: Toluene-d8	0.0393		"	0.0400		98.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0410		"	0.0400		102	50-150			

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Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

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

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

Batch BFE0065 - EPA 5030 Soil MS

Matrix Spike Dup (BFE0065-MSD1)

Source: 2205024-01

Prepared & Analyzed: 05/04/22

Benzene	0.0672	0.0020	mg/kg	0.0750	ND	89.6	70-130	1.07	30	
Toluene	0.0706	0.0050	"	0.0750	ND	94.2	70-130	2.14	30	
Ethylbenzene	0.0633	0.0050	"	0.0750	ND	84.4	70-130	2.66	30	
m,p-Xylene	0.149	0.010	"	0.150	ND	99.4	70-130	1.74	30	
o-Xylene	0.0709	0.0050	"	0.0750	ND	94.5	70-130	1.30	30	
1,2,4-Trimethylbenzene	0.0693	0.0050	"	0.0750	ND	92.4	70-130	1.55	30	
1,3,5-Trimethylbenzene	0.0664	0.0050	"	0.0750	ND	88.5	70-130	1.35	30	
Naphthalene	0.0785	0.0038	"	0.0750	ND	105	70-130	0.951	30	
Surrogate: 1,2-Dichloroethane-d4	0.0377		"	0.0400		94.2	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

Batch BFE0341 - EPA 5030 Soil MS

Blank (BFE0341-BLK1)

Prepared: 05/17/22 Analyzed: 05/18/22

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	0.0366		"	0.0400		91.6	50-150			
Surrogate: Toluene-d8	0.0394		"	0.0400		98.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.4	50-150			

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Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

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

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

Batch BFE0341 - EPA 5030 Soil MS

LCS (BFE0341-BS1)

Prepared: 05/17/22 Analyzed: 05/18/22

Benzene	0.0642	0.0020	mg/kg	0.0750		85.6	70-130			
Toluene	0.0642	0.0050	"	0.0750		85.6	70-130			
Ethylbenzene	0.0622	0.0050	"	0.0750		83.0	70-130			
m,p-Xylene	0.141	0.010	"	0.150		93.7	70-130			
o-Xylene	0.0672	0.0050	"	0.0750		89.6	70-130			
1,2,4-Trimethylbenzene	0.0624	0.0050	"	0.0750		83.2	70-130			
1,3,5-Trimethylbenzene	0.0618	0.0050	"	0.0750		82.4	70-130			
Naphthalene	0.0860	0.0038	"	0.0750		115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0360		"	0.0400		90.0	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.7	50-150			

Matrix Spike (BFE0341-MS1)

Source: 2205034-02

Prepared: 05/17/22 Analyzed: 05/18/22

Benzene	0.0613	0.0020	mg/kg	0.0750	ND	81.8	70-130			
Toluene	0.0637	0.0050	"	0.0750	ND	84.9	70-130			
Ethylbenzene	0.0614	0.0050	"	0.0750	ND	81.9	70-130			
m,p-Xylene	0.142	0.010	"	0.150	ND	94.6	70-130			
o-Xylene	0.0670	0.0050	"	0.0750	ND	89.3	70-130			
1,2,4-Trimethylbenzene	0.0636	0.0050	"	0.0750	ND	84.8	70-130			
1,3,5-Trimethylbenzene	0.0628	0.0050	"	0.0750	ND	83.8	70-130			
Naphthalene	0.0959	0.0038	"	0.0750	ND	128	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0357		"	0.0400		89.3	50-150			
Surrogate: Toluene-d8	0.0396		"	0.0400		99.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

Matrix Spike Dup (BFE0341-MSD1)

Source: 2205034-02

Prepared: 05/17/22 Analyzed: 05/18/22

Benzene	0.0627	0.0020	mg/kg	0.0750	ND	83.6	70-130	2.27	30	
Toluene	0.0646	0.0050	"	0.0750	ND	86.1	70-130	1.40	30	
Ethylbenzene	0.0614	0.0050	"	0.0750	ND	81.9	70-130	0.00	30	
m,p-Xylene	0.141	0.010	"	0.150	ND	93.9	70-130	0.785	30	
o-Xylene	0.0666	0.0050	"	0.0750	ND	88.8	70-130	0.539	30	
1,2,4-Trimethylbenzene	0.0634	0.0050	"	0.0750	ND	84.6	70-130	0.236	30	
1,3,5-Trimethylbenzene	0.0626	0.0050	"	0.0750	ND	83.4	70-130	0.431	30	
Naphthalene	0.0969	0.0038	"	0.0750	ND	129	70-130	0.996	30	
Surrogate: 1,2-Dichloroethane-d4	0.0372		"	0.0400		93.0	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.5	50-150			

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Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFE0066 - EPA 3550A

Blank (BFE0066-BLK1)

Prepared & Analyzed: 05/04/22

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

LCS (BFE0066-BS1)

Prepared & Analyzed: 05/04/22

C10-C28 (DRO)	381	50	mg/kg	500	76.3	70-130
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Matrix Spike (BFE0066-MS1)

Source: 2205024-01

Prepared & Analyzed: 05/04/22

C10-C28 (DRO)	435	50	mg/kg	500	9.04	85.1	70-130
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Matrix Spike Dup (BFE0066-MSD1)

Source: 2205024-01

Prepared: 05/04/22 Analyzed: 05/05/22

C10-C28 (DRO)	451	50	mg/kg	500	9.04	88.4	70-130	3.68	20
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Batch BFE0342 - EPA 3550A

Blank (BFE0342-BLK1)

Prepared & Analyzed: 05/17/22

C10-C28 (DRO)	ND	50	mg/kg
C28-C36 (ORO)	ND	50	"

LCS (BFE0342-BS1)

Prepared & Analyzed: 05/17/22

C10-C28 (DRO)	412	50	mg/kg	500	82.4	70-130
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Matrix Spike (BFE0342-MS1)

Source: 2205034-02

Prepared & Analyzed: 05/17/22

C10-C28 (DRO)	432	50	mg/kg	500	8.32	84.7	70-130
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Matrix Spike Dup (BFE0342-MSD1)

Source: 2205034-02

Prepared & Analyzed: 05/17/22

C10-C28 (DRO)	429	50	mg/kg	500	8.32	84.2	70-130	0.597	20
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Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFE0060 - EPA 5030 Soil MS

Blank (BFE0060-BLK1)

Prepared: 05/04/22 Analyzed: 05/05/22

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	0.0289		"	0.0333		86.7	40-150			
Surrogate: Fluoranthene-d10	0.0245		"	0.0333		73.6	40-150			

LCS (BFE0060-BS1)

Prepared: 05/04/22 Analyzed: 05/05/22

Acenaphthene	0.0367	0.00500	mg/kg	0.0333	110	31-137
Anthracene	0.0346	0.00500	"	0.0333	104	30-120
Benzo (a) anthracene	0.0311	0.00500	"	0.0333	93.4	30-120
Benzo (a) pyrene	0.0309	0.00500	"	0.0333	92.8	30-120
Benzo (b) fluoranthene	0.0311	0.00500	"	0.0333	93.2	30-120
Benzo (k) fluoranthene	0.0333	0.00500	"	0.0333	99.8	30-120
Chrysene	0.0309	0.00500	"	0.0333	92.7	30-120
Dibenz (a,h) anthracene	0.0185	0.00500	"	0.0333	55.4	30-120
Fluoranthene	0.0289	0.00500	"	0.0333	86.7	30-120
Fluorene	0.0365	0.00500	"	0.0333	109	30-120
Indeno (1,2,3-cd) pyrene	0.0162	0.00500	"	0.0333	48.6	30-120
Pyrene	0.0422	0.00500	"	0.0333	127	35-142
1-Methylnaphthalene	0.0355	0.00500	"	0.0333	107	35-142
2-Methylnaphthalene	0.0420	0.00500	"	0.0333	126	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0323		"	0.0333	96.8	40-150
Surrogate: Fluoranthene-d10	0.0302		"	0.0333	90.6	40-150

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFE0060 - EPA 5030 Soil MS

Matrix Spike (BFE0060-MS1)			Source: 2205032-01		Prepared: 05/04/22 Analyzed: 05/05/22						
Acenaphthene	0.0191	0.00500	mg/kg	0.0333	ND	57.3	31-137				
Anthracene	0.0182	0.00500	"	0.0333	ND	54.7	30-120				
Benzo (a) anthracene	0.0206	0.00500	"	0.0333	ND	61.9	30-120				
Benzo (a) pyrene	0.0218	0.00500	"	0.0333	ND	65.4	30-120				
Benzo (b) fluoranthene	0.0281	0.00500	"	0.0333	ND	84.4	30-120				
Benzo (k) fluoranthene	0.0310	0.00500	"	0.0333	ND	93.1	30-120				
Chrysene	0.0212	0.00500	"	0.0333	ND	63.5	30-120				
Dibenz (a,h) anthracene	0.0113	0.00500	"	0.0333	ND	33.9	30-120				
Fluoranthene	0.0179	0.00500	"	0.0333	ND	53.8	30-120				
Fluorene	0.0185	0.00500	"	0.0333	ND	55.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0166	0.00500	"	0.0333	ND	49.9	30-120				
Pyrene	0.0313	0.00500	"	0.0333	ND	93.9	35-142				
1-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	58.7	15-130				
2-Methylnaphthalene	0.0216	0.00500	"	0.0333	ND	64.8	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0208		"	0.0333		62.5	40-150				
Surrogate: Fluoranthene-d10	0.0187		"	0.0333		56.1	40-150				

Matrix Spike Dup (BFE0060-MSD1)			Source: 2205032-01		Prepared: 05/04/22 Analyzed: 05/05/22						
Acenaphthene	0.0182	0.00500	mg/kg	0.0333	ND	54.7	31-137	4.65	30		
Anthracene	0.0187	0.00500	"	0.0333	ND	56.2	30-120	2.63	30		
Benzo (a) anthracene	0.0192	0.00500	"	0.0333	ND	57.5	30-120	7.33	30		
Benzo (a) pyrene	0.0213	0.00500	"	0.0333	ND	64.0	30-120	2.18	30		
Benzo (b) fluoranthene	0.0278	0.00500	"	0.0333	ND	83.4	30-120	1.27	30		
Benzo (k) fluoranthene	0.0318	0.00500	"	0.0333	ND	95.5	30-120	2.54	30		
Chrysene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	9.30	30		
Dibenz (a,h) anthracene	0.0113	0.00500	"	0.0333	ND	33.9	30-120	0.0383	30		
Fluoranthene	0.0156	0.00500	"	0.0333	ND	46.9	30-120	13.7	30		
Fluorene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	0.641	30		
Indeno (1,2,3-cd) pyrene	0.0135	0.00500	"	0.0333	ND	40.5	30-120	20.7	30		
Pyrene	0.0295	0.00500	"	0.0333	ND	88.4	35-142	6.07	30		
1-Methylnaphthalene	0.0191	0.00500	"	0.0333	ND	57.2	15-130	2.65	50		
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.5	15-130	0.514	50		
Surrogate: 2-Methylnaphthalene-d10	0.0204		"	0.0333		61.3	40-150				
Surrogate: Fluoranthene-d10	0.0192		"	0.0333		57.6	40-150				

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFE0344 - EPA 5030 Soil MS

Blank (BFE0344-BLK1)

Prepared: 05/17/22 Analyzed: 05/18/22

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	0.0289		"	0.0333		86.6	40-150			
Surrogate: Fluoranthene-d10	0.0300		"	0.0333		89.9	40-150			

LCS (BFE0344-BS1)

Prepared: 05/17/22 Analyzed: 05/18/22

Acenaphthene	0.0407	0.00500	mg/kg	0.0333	122	31-137
Anthracene	0.0350	0.00500	"	0.0333	105	30-120
Benzo (a) anthracene	0.0258	0.00500	"	0.0333	77.3	30-120
Benzo (a) pyrene	0.0274	0.00500	"	0.0333	82.2	30-120
Benzo (b) fluoranthene	0.0215	0.00500	"	0.0333	64.4	30-120
Benzo (k) fluoranthene	0.0248	0.00500	"	0.0333	74.3	30-120
Chrysene	0.0289	0.00500	"	0.0333	86.8	30-120
Dibenz (a,h) anthracene	0.0173	0.00500	"	0.0333	51.8	30-120
Fluoranthene	0.0373	0.00500	"	0.0333	112	30-120
Fluorene	0.0342	0.00500	"	0.0333	102	30-120
Indeno (1,2,3-cd) pyrene	0.0229	0.00500	"	0.0333	68.7	30-120
Pyrene	0.0229	0.00500	"	0.0333	68.8	35-142
1-Methylnaphthalene	0.0359	0.00500	"	0.0333	108	35-142
2-Methylnaphthalene	0.0383	0.00500	"	0.0333	115	35-142
Surrogate: 2-Methylnaphthalene-d10	0.0316		"	0.0333	94.8	40-150
Surrogate: Fluoranthene-d10	0.0332		"	0.0333	99.6	40-150

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFE0344 - EPA 5030 Soil MS

Matrix Spike (BFE0344-MS1)

Source: 2205034-02

Prepared: 05/17/22 Analyzed: 05/18/22

Acenaphthene	0.0244	0.00500	mg/kg	0.0333	ND	73.2	31-137				
Anthracene	0.0214	0.00500	"	0.0333	ND	64.1	30-120				
Benzo (a) anthracene	0.0168	0.00500	"	0.0333	ND	50.5	30-120				
Benzo (a) pyrene	0.0167	0.00500	"	0.0333	ND	50.1	30-120				
Benzo (b) fluoranthene	0.0139	0.00500	"	0.0333	ND	41.7	30-120				
Benzo (k) fluoranthene	0.0147	0.00500	"	0.0333	ND	44.2	30-120				
Chrysene	0.0183	0.00500	"	0.0333	ND	54.9	30-120				
Dibenz (a,h) anthracene	0.0135	0.00500	"	0.0333	ND	40.4	30-120				
Fluoranthene	0.0211	0.00500	"	0.0333	ND	63.2	30-120				
Fluorene	0.0205	0.00500	"	0.0333	ND	61.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0156	0.00500	"	0.0333	ND	46.7	30-120				
Pyrene	0.0146	0.00500	"	0.0333	ND	43.7	35-142				
1-Methylnaphthalene	0.0221	0.00500	"	0.0333	ND	66.2	15-130				
2-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	65.9	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0207		"	0.0333		62.0	40-150				
Surrogate: Fluoranthene-d10	0.0189		"	0.0333		56.6	40-150				

Matrix Spike Dup (BFE0344-MSD1)

Source: 2205034-02

Prepared: 05/17/22 Analyzed: 05/18/22

Acenaphthene	0.0316	0.00500	mg/kg	0.0333	ND	94.8	31-137	25.7	30		
Anthracene	0.0228	0.00500	"	0.0333	ND	68.4	30-120	6.47	30		
Benzo (a) anthracene	0.0178	0.00500	"	0.0333	ND	53.5	30-120	5.81	30		
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.6	30-120	6.67	30		
Benzo (b) fluoranthene	0.0151	0.00500	"	0.0333	ND	45.4	30-120	8.48	30		
Benzo (k) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.1	30-120	12.5	30		
Chrysene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	9.43	30		
Dibenz (a,h) anthracene	0.0127	0.00500	"	0.0333	ND	38.0	30-120	6.09	30		
Fluoranthene	0.0237	0.00500	"	0.0333	ND	71.2	30-120	11.9	30		
Fluorene	0.0233	0.00500	"	0.0333	ND	70.0	30-120	12.8	30		
Indeno (1,2,3-cd) pyrene	0.0163	0.00500	"	0.0333	ND	48.8	30-120	4.42	30		
Pyrene	0.0154	0.00500	"	0.0333	ND	46.1	35-142	5.29	30		
1-Methylnaphthalene	0.0256	0.00500	"	0.0333	ND	76.9	15-130	14.9	50		
2-Methylnaphthalene	0.0261	0.00500	"	0.0333	ND	78.3	15-130	17.2	50		
Surrogate: 2-Methylnaphthalene-d10	0.0225		"	0.0333		67.5	40-150				
Surrogate: Fluoranthene-d10	0.0216		"	0.0333		64.9	40-150				

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

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

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

Batch BFE0161 - EPA 3050B

Blank (BFE0161-BLK1)

Prepared: 05/09/22 Analyzed: 05/16/22

Boron ND 0.0100 mg/L

LCS (BFE0161-BS1)

Prepared: 05/09/22 Analyzed: 05/16/22

Boron 5.34 0.0100 mg/L 5.00 107 80-120

Duplicate (BFE0161-DUP1)

Source: 2205034-01

Prepared: 05/09/22 Analyzed: 05/16/22

Boron 0.140 0.0100 mg/L 0.146 4.31 20

Matrix Spike (BFE0161-MS1)

Source: 2205034-01

Prepared: 05/09/22 Analyzed: 05/16/22

Boron 5.24 0.0100 mg/L 5.00 0.146 102 75-125

Matrix Spike Dup (BFE0161-MSD1)

Source: 2205034-01

Prepared: 05/09/22 Analyzed: 05/16/22

Boron 5.30 0.0100 mg/L 5.00 0.146 103 75-125 1.10 25

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFE0430 - EPA 3050B

Blank (BFE0430-BLK1)

Prepared: 05/19/22 Analyzed: 05/25/22

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	"
Selenium	ND	0.260	"
Silver	ND	0.0200	"
Zinc	ND	0.400	"

LCS (BFE0430-BS1)

Prepared: 05/19/22 Analyzed: 05/25/22

Arsenic	41.7	0.200	mg/kg wet	40.0	104	80-120
Barium	44.2	0.400	"	40.0	110	80-120
Cadmium	2.17	0.200	"	2.00	108	80-120
Copper	39.9	0.400	"	40.0	99.6	80-120
Lead	21.3	0.200	"	20.0	106	80-120
Nickel	38.8	0.400	"	40.0	97.1	80-120
Selenium	3.93	0.260	"	4.00	98.4	80-120
Silver	2.13	0.0200	"	2.00	107	80-120
Zinc	42.6	0.400	"	40.0	107	80-120

Duplicate (BFE0430-DUP1)

Source: 2205034-05

Prepared: 05/19/22 Analyzed: 05/25/22

Arsenic	3.83	0.269	mg/kg dry	4.10	6.87	20
Barium	220	0.538	"	252	13.9	20
Cadmium	0.184	0.269	"	0.189	2.46	20
Copper	6.76	0.538	"	7.29	7.56	20
Lead	12.3	0.269	"	13.7	11.1	20
Nickel	5.26	0.538	"	5.41	2.72	20
Selenium	0.867	0.350	"	1.02	16.7	20
Silver	0.0513	0.0269	"	0.0579	12.1	20
Zinc	22.2	0.538	"	23.5	5.55	20

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFE0430 - EPA 3050B

Matrix Spike (BFE0430-MS1)		Source: 2205034-05			Prepared: 05/19/22 Analyzed: 05/25/22					
Arsenic	60.3	0.269	mg/kg dry	53.8	4.10	105	75-125			
Barium	291	0.538	"	53.8	252	72.5	75-125			QM-02
Cadmium	3.28	0.269	"	2.69	0.189	115	75-125			
Copper	58.6	0.538	"	53.8	7.29	95.4	75-125			
Lead	40.4	0.269	"	26.9	13.7	99.2	75-125			
Nickel	58.4	0.538	"	53.8	5.41	98.4	75-125			
Selenium	5.90	0.350	"	5.38	1.02	90.6	75-125			
Silver	3.04	0.0269	"	2.69	0.0579	111	75-125			
Zinc	82.3	0.538	"	53.8	23.5	109	75-125			

Matrix Spike Dup (BFE0430-MSD1)		Source: 2205034-05			Prepared: 05/19/22 Analyzed: 05/25/22					
Arsenic	61.2	0.269	mg/kg dry	53.8	4.10	106	75-125	1.47	25	
Barium	623	0.538	"	53.8	252	688	75-125	72.5	25	QM-02
Cadmium	3.07	0.269	"	2.69	0.189	107	75-125	6.92	25	
Copper	60.2	0.538	"	53.8	7.29	98.4	75-125	2.70	25	
Lead	39.8	0.269	"	26.9	13.7	97.0	75-125	1.45	25	
Nickel	60.1	0.538	"	53.8	5.41	102	75-125	2.87	25	
Selenium	6.21	0.350	"	5.38	1.02	96.3	75-125	5.05	25	
Silver	2.86	0.0269	"	2.69	0.0579	104	75-125	5.87	25	
Zinc	81.5	0.538	"	53.8	23.5	108	75-125	0.954	25	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFE0492 - 3060A Mod

Blank (BFE0492-BLK1)

Prepared & Analyzed: 05/23/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFE0492-BS1)

Prepared & Analyzed: 05/23/22

Chromium, Hexavalent 28.1 0.30 mg/kg wet 25.0 112 80-120

Duplicate (BFE0492-DUP1)

Source: 2205034-05

Prepared & Analyzed: 05/23/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFE0492-MS1)

Source: 2205034-05

Prepared & Analyzed: 05/23/22

Chromium, Hexavalent 35.7 0.30 mg/kg dry 33.6 ND 106 75-125

Matrix Spike Dup (BFE0492-MSD1)

Source: 2205034-05

Prepared & Analyzed: 05/23/22

Chromium, Hexavalent 36.6 0.30 mg/kg dry 33.6 ND 109 75-125 2.61 20

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

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

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

Batch BFE0167 - General Preparation

Blank (BFE0167-BLK1)

Prepared: 05/09/22 Analyzed: 05/16/22

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

LCS (BFE0167-BS1)

Prepared: 05/09/22 Analyzed: 05/16/22

Calcium	5.85	0.0500	mg/L wet	5.00	117	70-130
Magnesium	6.05	0.0500	"	5.00	121	70-130
Sodium	5.69	0.0500	"	5.00	114	70-130

Batch BFE0497 - General Preparation

Blank (BFE0497-BLK1)

Prepared: 05/23/22 Analyzed: 05/27/22

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

LCS (BFE0497-BS1)

Prepared: 05/23/22 Analyzed: 05/27/22

Calcium	637	0.0500	mg/L wet	500	127	70-130
Magnesium	542	0.0500	"	500	108	70-130
Sodium	595	0.0500	"	500	119	70-130

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

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

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

Batch BFE0067 - General Preparation

Duplicate (BFE0067-DUP1)		Source: 2205022-01			Prepared & Analyzed: 05/04/22					
% Solids	86.7		%		84.3			2.78	20	

Batch BFE0607 - General Preparation

Duplicate (BFE0607-DUP1)		Source: 2205034-02			Prepared: 05/26/22 Analyzed: 05/27/22					
% Solids	78.8		%		78.5			0.369	20	

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

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

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

Batch BFE0193 - General Preparation

Blank (BFE0193-BLK1)

Prepared & Analyzed: 05/10/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFE0193-BS1)

Prepared & Analyzed: 05/10/22

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BFE0193-DUP1)

Source: 2205024-04

Prepared & Analyzed: 05/10/22

Specific Conductance (EC) 0.349 0.0100 mmhos/cm 0.364 4.12 20

Batch BFE0499 - General Preparation

Blank (BFE0499-BLK1)

Prepared: 05/23/22 Analyzed: 05/24/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFE0499-BS1)

Prepared: 05/23/22 Analyzed: 05/24/22

Specific Conductance (EC) 0.158 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BFE0499-DUP1)

Source: 2205034-02

Prepared: 05/23/22 Analyzed: 05/24/22

Specific Conductance (EC) 0.523 0.0100 mmhos/cm 0.564 7.57 20

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 - Lilli Unit 0-5 Fac
Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

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

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

Batch BFE0194 - General Preparation

LCS (BFE0194-BS1)

Prepared & Analyzed: 05/10/22

pH	9.13		pH Units	9.18		99.5	95-105
----	------	--	----------	------	--	------	--------

Duplicate (BFE0194-DUP1)

Source: 2205024-04

Prepared & Analyzed: 05/10/22

pH	8.11		pH Units		8.10		0.123	20
----	------	--	----------	--	------	--	-------	----

Batch BFE0498 - General Preparation

LCS (BFE0498-BS1)

Prepared: 05/23/22 Analyzed: 05/24/22

pH	9.06		pH Units	9.18		98.7	95-105
----	------	--	----------	------	--	------	--------

Duplicate (BFE0498-DUP1)

Source: 2205034-02

Prepared: 05/23/22 Analyzed: 05/24/22

pH	8.30		pH Units		8.24		0.726	20
----	------	--	----------	--	------	--	-------	----

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: UWRWE-A1632-ABN
Project Manager: Jacob Whritenour

Reported:
06/01/22 14:04

Notes and Definitions

QM-02	The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
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

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 16, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Lilli Unit 0-5 Fac

Work Order #2208149

Enclosed are the results of analyses for samples received by Summit Scientific on 08/10/22 17:22. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury
President



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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG02@3.5'	2208149-01	Soil	08/10/22 13:00	08/10/22 17:22
BG02@5'	2208149-02	Soil	08/10/22 13:05	08/10/22 17:22
BG03@3.5'	2208149-03	Soil	08/10/22 13:10	08/10/22 17:22
BG03@5'	2208149-04	Soil	08/10/22 13:15	08/10/22 17:22
BG04@3.5'	2208149-05	Soil	08/10/22 13:20	08/10/22 17:22
BG04@5'	2208149-06	Soil	08/10/22 13:25	08/10/22 17:22
BG05@3.5'	2208149-07	Soil	08/10/22 13:30	08/10/22 17:22
BG05@5'	2208149-08	Soil	08/10/22 13:35	08/10/22 17:22
BG06@3.5'	2208149-09	Soil	08/10/22 13:40	08/10/22 17:22
BG06@5'	2208149-10	Soil	08/10/22 13:45	08/10/22 17:22
BH01@5'	2208149-11	Soil	08/10/22 13:50	08/10/22 17:22
BH02@3'	2208149-12	Soil	08/10/22 13:55	08/10/22 17:22
BH02@5'	2208149-13	Soil	08/10/22 14:00	08/10/22 17:22
BH03@3'	2208149-14	Soil	08/10/22 14:05	08/10/22 17:22
BH03@5'	2208149-15	Soil	08/10/22 14:10	08/10/22 17:22
BH04@3'	2208149-16	Soil	08/10/22 14:15	08/10/22 17:22
BH04@5'	2208149-17	Soil	08/10/22 14:20	08/10/22 17:22
BH05@3'	2208149-18	Soil	08/10/22 14:25	08/10/22 17:22
BH05@5'	2208149-19	Soil	08/10/22 14:30	08/10/22 17:22

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.

Summit Scientific

2208149.1

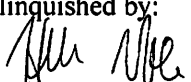
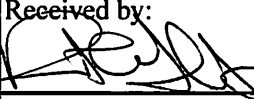
S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 1 of 2

Client: Noble / Tasman Project Manager: Jake Whritenour Invoice: Erica Zuniga
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield, CO 80020
Phone: 303-261-6246 Project Name: Lili Unit 0-5
Sampler Name: Stanley Gilbert Project Number:

					Preservative				Matrix				Analysis Requested								Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	Arsenic, Barium, Selenium	SAR	pH, EC, SAR by saturated paste	
1	BG02 @ 3.5'	8/10/22	1300	1			X			X										X	X	
2	BG07 @ 5'		1305	1																		
3	BG03 @ 3.5'		1310	1																		
4	BG03 @ 5'		1315	1																		
5	BG04 @ 3.5'		1320	1																		
6	BG04 @ 5'		1325	1																		
7	BG05 @ 3.5'		1330	1																		
8	BG05 @ 5'		1335	1																		
9	BG06 @ 3.5'		1340	1																		
10	BG06 @ 5'	✓	1345	✓			✓			✓									✓	✓		

Relinquished by: 	Date/Time: 8/10/22 17:05	Received by: Tasman's Lock Box	Date/Time: 8/10/22 17:05	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 8/10/22 1722	Received by: 	Date/Time: 8/10/22 1722	Sample Integrity: Temperature Upon Receipt: 10.1	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Summit Scientific

S₂

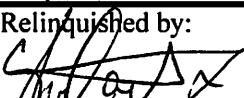
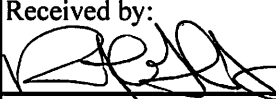
2208149.2

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310

Page 2 of 2

Client: Noble / Tasman Project Manager: Jake Whritenour Invoice: Erica Zuniga
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield, CO 80020
Phone: 303-261-6246 Project Name: Lilli Unit 0-5
Sampler Name: Stanley Gilbert Project Number:

					Preservative				Matrix				Analysis Requested							Special Instructions	
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	SAR	pH, EC, SAR by saturated paste	
1	BH0105'	8/10/22	1350	1			X			X											
2	BH0203'		1355	1																	
3	BH0205'		1400	1																	
4	BH0303'		1405	1																	
5	BH0305'		1410	1																	
6	BH0403'		1415	1																	
7	BH0405'		1420	1																	
8	BH0503'		1425	1																	
9	BH0505'		1430	1																	
10																					

Relinquished by: 	Date/Time: 8/10/22 17:05	Received by: Tasman's Lock Box	Date/Time: 8/10/22 17:05	Turn Around Time (Check) Same Day <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 8/10/22 1722	Received by: 	Date/Time: 8/10/22 1722	Sample Integrity: Temperature Upon Receipt: 10.1	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: (Yes) No	

Client: Noble/Tasman Client Project ID: Mill Unit 0-5

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

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

Temp ($^{\circ}\text{C}$)	10.1
-----------------------------	------

Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature $< 6^{\circ}\text{C}$ ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	-			on ice
Were all samples received intact ⁽¹⁾ ?	-			
Was adequate sample volume provided ⁽¹⁾ ?	-			
If custody seals are present, are they intact ⁽¹⁾ ?	-			
Are samples due within 48 hours present?		-		
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			-	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	-			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	-			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	-			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the comments column – HCl, H_2SO_4 , NaOH, HNO_3 , etc.			-	
If samples are acid preserved for metals, is the $\text{pH} \leq 2$ ⁽¹⁾ ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				

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

Custodian Printed Name

Date/Time



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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG02@3.5'
2208149-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.49	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	183	0.400	"	"	"	"	"	"	
Selenium	0.710	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	9.31	0.0563	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	3.60	0.0563	"	"	"	"	"	"	
Sodium	57.2	0.0563	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.03	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.8		%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG02@5'
2208149-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.84	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	269	0.400	"	"	"	"	"	"	
Selenium	0.844	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	11.3	0.0573	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	5.93	0.0573	"	"	"	"	"	"	
Sodium	167	0.0573	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	10.0	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.3		%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG03@3.5'
2208149-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.14	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	262	0.400	"	"	"	"	"	"	
Selenium	0.675	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	11.6	0.0573	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	4.89	0.0573	"	"	"	"	"	"	
Sodium	75.2	0.0573	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.67	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.3		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG03@5'
2208149-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.38	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	218	0.400	"	"	"	"	"	"	
Selenium	0.808	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	14.7	0.0583	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	7.16	0.0583	"	"	"	"	"	"	
Sodium	161	0.0583	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	8.61	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.8		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG04@3.5'
2208149-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.95	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	312	0.400	"	"	"	"	"	"	
Selenium	0.708	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	11.5	0.0567	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	4.68	0.0567	"	"	"	"	"	"	
Sodium	89.1	0.0567	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	5.60	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	88.2		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG04@5'
2208149-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.36	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	258	0.400	"	"	"	"	"	"	
Selenium	0.744	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	17.7	0.0571	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	8.28	0.0571	"	"	"	"	"	"	
Sodium	153	0.0571	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	7.52	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.5		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG05@3.5'
2208149-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.62	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	217	0.400	"	"	"	"	"	"	
Selenium	0.697	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	14.5	0.0561	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	5.45	0.0561	"	"	"	"	"	"	
Sodium	52.3	0.0561	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	2.97	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	89.1		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/16/22 13:08

BG05@5'
2208149-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.08	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	247	0.400	"	"	"	"	"	"	
Selenium	0.691	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	9.04	0.0572	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	3.86	0.0572	"	"	"	"	"	"	
Sodium	78.7	0.0572	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	5.52	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	87.4		%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG06@3.5'
2208149-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.02	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	558	0.400	"	"	"	"	"	"	
Selenium	0.757	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	11.9	0.0585	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	5.17	0.0585	"	"	"	"	"	"	
Sodium	75.2	0.0585	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.58	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	85.4		%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BG06@5'
2208149-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.80	0.200	mg/kg dry	1	BFH0264	08/12/22	08/13/22	EPA 6020B	
Barium	248	0.400	"	"	"	"	"	"	
Selenium	0.725	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	17.8	0.0577	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	7.44	0.0577	"	"	"	"	"	"	
Sodium	132	0.0577	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	6.63	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	86.6		%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BH01@5'
2208149-11 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	196	0.0623		mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	16.1	0.0623		"	"	"	"	"	"	
Sodium	32.7	0.0623		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	0.604	0.00100		units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	80.3			%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/16/22 13:08

BH02@3'
2208149-12 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	11.6	0.0619		mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	4.49	0.0619		"	"	"	"	"	"	
Sodium	40.2	0.0619		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	2.54	0.00100		units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 13:55**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	80.8			%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BH02@5'
2208149-13 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	10.1	0.0612	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	4.68	0.0612	"	"	"	"	"	"	
Sodium	67.0	0.0612	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.37	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 14:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.7		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BH03@3'
2208149-14 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 14:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	365	0.0602	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	173	0.0602	"	"	"	"	"	"	
Sodium	242	0.0602	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 14:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	2.61	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 14:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	83.1		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BH03@5'
2208149-15 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 14:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	318	0.0600	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	148	0.0600	"	"	"	"	"	"	
Sodium	761	0.0600	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 14:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	8.84	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 14:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	83.4		%	1	BFH0289	08/15/22	08/15/22	Calculation	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BH04@3'
2208149-16 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	59.9	0.0631	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	26.1	0.0631	"	"	"	"	"	"	
Sodium	204	0.0631	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	5.54	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 14:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	79.3		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

BH04@5'
2208149-17 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	36.1	0.0621		mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	15.4	0.0621		"	"	"	"	"	"	
Sodium	211	0.0621		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	7.41	0.00100		units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 14:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	80.5			%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/16/22 13:08

BH05@3'
2208149-18 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 14:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	12.7	0.0622		mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	5.73	0.0622		"	"	"	"	"	"	
Sodium	36.4	0.0622		"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 14:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Sodium Adsorption Ratio	2.13	0.00100		units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 14:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	80.4			%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/16/22 13:08

BH05@5'
2208149-19 (Soil)

Summit Scientific

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

Date Sampled: **08/10/22 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	351	0.0627	mg/L dry	1	BFH0235	08/11/22	08/13/22	EPA 6020B	
Magnesium	19.1	0.0627	"	"	"	"	"	"	
Sodium	116	0.0627	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	1.63	0.00100	units	1	BFH0315	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 14:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	79.8		%	1	BFH0289	08/15/22	08/15/22	Calculation	

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 - Lilli Unit 0-5 Fac

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/16/22 13:08

Total Metals by EPA 6020B - Quality Control

Summit Scientific

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

Batch BFH0264 - EPA 3050B

Blank (BFH0264-BLK1)

Prepared: 08/12/22 Analyzed: 08/13/22

Arsenic	ND	0.200	mg/kg wet
Barium	ND	0.400	"
Selenium	ND	0.260	"

LCS (BFH0264-BS1)

Prepared: 08/12/22 Analyzed: 08/13/22

Arsenic	45.7	0.200	mg/kg wet	40.0	114	80-120
Barium	41.6	0.400	"	40.0	104	80-120
Selenium	4.13	0.260	"	4.00	103	80-120

Duplicate (BFH0264-DUP1)

Source: 2208132-01

Prepared: 08/12/22 Analyzed: 08/13/22

Arsenic	1.32	0.200	mg/kg dry	1.26	5.26	20
Barium	75.0	0.400	"	85.5	13.1	20
Selenium	1.19	0.260	"	1.35	12.3	20

Matrix Spike (BFH0264-MS1)

Source: 2208132-01

Prepared: 08/12/22 Analyzed: 08/13/22

Arsenic	47.7	0.200	mg/kg dry	47.0	1.26	98.8	75-125
Barium	116	0.400	"	47.0	85.5	65.4	75-125
Selenium	5.28	0.260	"	4.70	1.35	83.8	75-125

QM-05

Matrix Spike Dup (BFH0264-MSD1)

Source: 2208132-01

Prepared: 08/12/22 Analyzed: 08/13/22

Arsenic	45.4	0.200	mg/kg dry	47.0	1.26	93.9	75-125	4.95	25
Barium	121	0.400	"	47.0	85.5	75.9	75-125	4.14	25
Selenium	5.21	0.260	"	4.70	1.35	82.3	75-125	1.38	25

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 - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

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

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

Batch BFH0235 - General Preparation

Blank (BFH0235-BLK1)

Prepared: 08/11/22 Analyzed: 08/13/22

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

LCS (BFH0235-BS1)

Prepared: 08/11/22 Analyzed: 08/13/22

Calcium	5.50	0.0500	mg/L wet	5.00	110	70-130
Magnesium	5.02	0.0500	"	5.00	100	70-130
Sodium	4.96	0.0500	"	5.00	99.1	70-130

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

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

Summit Scientific

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

Batch BFH0289 - General Preparation

Duplicate (BFH0289-DUP1)		Source: 2207429-02		Prepared & Analyzed: 08/15/22						
% Solids	83.1		%		83.4			0.396	20	

Summit Scientific

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

Project: Noble - Lilli Unit 0-5 Fac

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 13:08

Notes and Definitions

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.
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