

Tank Battery Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Partially Buried Vault Closure	
Site Name & COGCC Facility Number: Lilli Unit P-7		Date: 5/13/2022						Remediation Project #: 21697	
Associated Wells:		Age of Site:						Number of Photos Attached: 13	
Location: (GPS coordinates of southeaster berm) 40.669211, -103.900819							Estimated Facility Size (acres):		

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)

Good, no visible sign of erosion and corrosion

USCS Soil Type: Lean Clay - CL Estimated Depth to Groundwater: >4'

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

Yes, located in the Partially buried vault located on the south side 2.5' down

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)

None Observed

Tanks

Tank Contents	Produced Water	Crude Oil						
Size (barrels)								
Age								
Construction Material	Steele	Steele						
Tank type (AST/PBV, etc.)	PBV	AST						
Visual Integrity of Tank	Good	Good						
Condition of tank feet/wall	Good	Good						
PID Readings								
Soil impacts present at valves or hatches?	None observed	None observed						
PID Readings	0.7, 1.2, 3.6, 3.6, 1059	0.4, 0.9						
Sample taken? Location/ Sample ID#	yes, see below	yes, see below						
Photo Number(s)	1 - 5	6, 7						

Other observations regarding tanks:
 Samples taken on all 4 sidewalls and base of excavation (SS01-04@2.5', FS01@4') Sample taken at base of AST, AST01-02@0.5'

Separators

Separator size							
Vertical or Horizontal	Vertical						
Age							
Soil impacts present at valves or hatches?	None observed						
PID Readings	2.4, 3.3						
Sample taken? Location/ Sample ID#	yes, see below						
Photo Number(s)	8, 9						

Other observations regarding separators:
 Samples taken at Flowline and Dumpline ends of separator (SEP01-FL@3' & SEP01-DL@3')

Third Party Equipment

Type							
Age							

Third Party									
Removal Date									
Sample taken?									
PID Readings									
Photo Number(s)									

Other Facility Equipment

Equipment type	Meter House	Treater		
Equipment Condition	Good	Good		
Age				
Soil impacts	None observed	None observed		
PID Readings	0.0	2.1		
Sample taken?	Yes, see below	Yes, see below		
Photo Number(s)	10	13		

Other observations regarding other facility or third party equipment:

Sample taken below meter house and treater. (MH01@0.5')and (Treater01@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: 13	Total number of samples collected: 13
Highest PID Reading: 1059	Total number of samples submitted to lab for analysis: 12
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent: Unknown	Estimated spill volume: Unknown
Lateral extent: Unknown	Volume of soil removed: Unknown
Is additional investigation required? Yes	
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

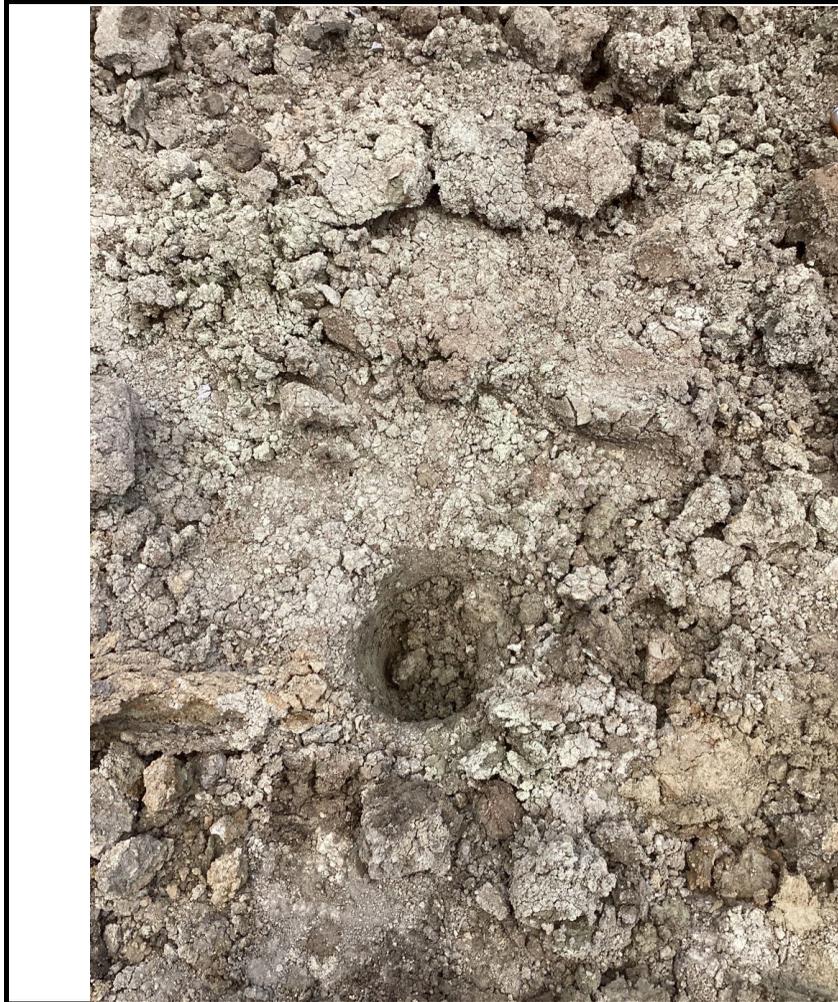

Equipment ID: SS01 @2.5'		Equipment Type: Partially Buried Vault		Equipment ID: SS02 @2.5'		Equipment Type: Partially Buried Vault	
Material: Concrete	Volume:	Contents: Produced Water		Material: Concrete	Volume:	Contents: Produced Water	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: SS03@2.5'		Equipment Type: Partially Buried Vault		Equipment ID: SS04@2.5'		Equipment Type: Partially Buried Vault	
Material: Concrete	Volume:	Contents: Produced Water		Material: Concrete	Volume:	Contents: Produced Water	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: FS01 @4' **Equipment Type:** Partially Buried Vault

Material: Concrete

Volume:

Contents: Produced Water

Notes/Conditions:

Equipment ID: AST01 @0.5' **Equipment Type:** Above Ground Storage Tank

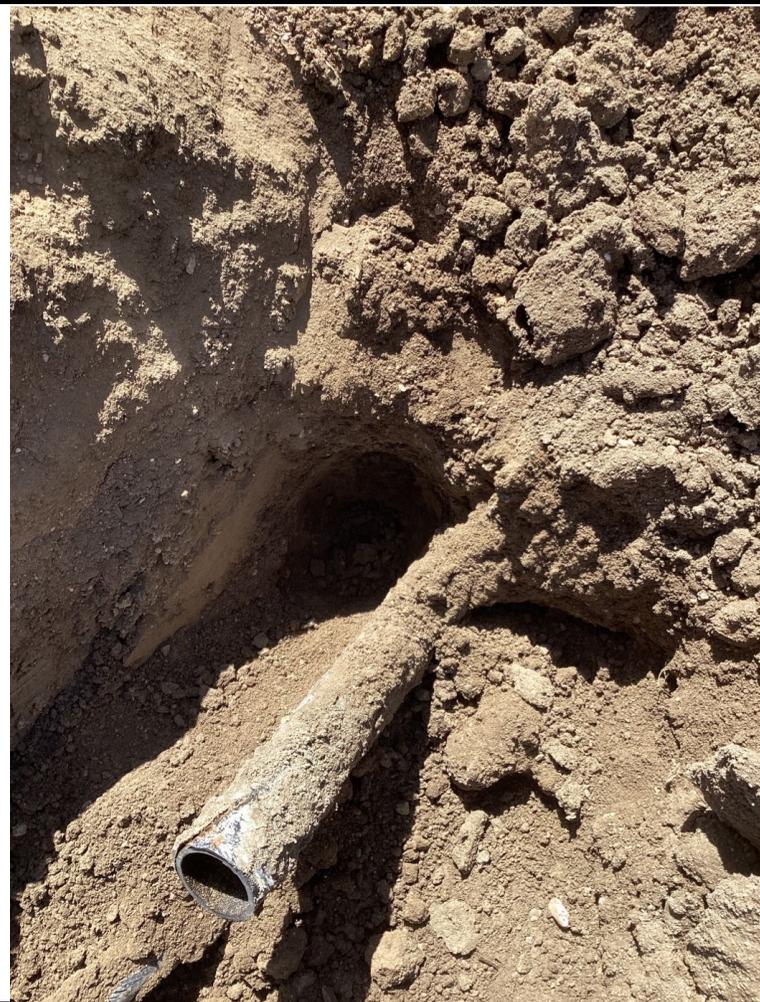
Material: Steel

Volume:

Contents: Crude Oil

Notes/Conditions:

Photographic Log



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

Equipment ID: SEP01-FL@3'	Equipment Type: Separator	
Material: Steel	Volume:	Contents: Oil/Gas/Water
Notes/Conditions:		

Photographic Log



Equipment ID: SEP01-DL@3'		Equipment Type: Separator		Equipment ID: MH01@0.5'		Equipment Type:	
Material: Steel	Volume:	Contents: Oil/Gas/Water		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log



Equipment ID: BG01@2.5'		Equipment Type:		Equipment ID: BG01@4'		Equipment Type:	
Material:	Volume:	Contents:		Material:	Volume:	Contents:	
Notes/Conditions:				Notes/Conditions:			

Photographic Log

									
Equipment ID: <small>Treater01@0.5'</small>		Equipment Type:		Equipment ID:		Equipment Type:			
Material:		Volume:		Material:		Volume:		Contents:	
Notes/Conditions:					Notes/Conditions:				

Photographic Log

					
Equipment ID: BG02		Equipment Type:	Equipment ID: BG03		Equipment Type:
Material:	Volume:	Contents:	Material:	Volume:	Contents:
Notes/Conditions: Hand auger sample location BG02 at 2.5' and 5'.			Notes/Conditions: Hand auger sample location BG03 at 2.5' and 5'.		

Photographic Log

Photographic Log

Photographic Log



Equipment ID: BH02		Equipment Type:		Equipment ID:		Equipment Type:	
Material:		Volume:		Material:		Volume:	
Contents:		Contents:		Material:		Volume:	
Notes/Conditions: Hand auger sample location BH02@2.5'.				Notes/Conditions:			

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - LILLI UNIT P-7 (FAC)

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
SS01@2.5'	05/13/22	1.2	Organic Content	Organic Odor	Lab	40.66925139	-103.90115420	1.1
SS02@2.5'	05/13/22	0.7	Organic Content	Organic Odor	Lab	40.66923828	-103.90112937	1.0
SS03@2.5'	05/13/22	1059	HC Staining	Strong HC Odor	Lab	40.66920447	-103.90116780	1.1
SS04@2.5'	05/13/22	3.6	No Staining	Organic Odor	Lab	40.66923005	-103.90118715	1.1
FS01@4'	05/13/22	3.6	Organic Content	Organic Odor	Lab	40.66922026	-103.90115627	1.0
AST01@0.5'	05/13/22	0.9	Organic Content	No Odor	Lab	40.66917688	-103.90116801	1.2
AST02@0.5'	05/13/22	0.4	Organic Content	No Odor	Lab	40.66918588	-103.90122091	1.8
SEP01-FL@3'	05/13/22	3.3	No Staining	No Odor	Lab	40.66918841	-103.90087046	1.3
SEP01-DL@3'	05/13/22	2.4	No Staining	No Odor	Lab	40.66919824	-103.90086993	1.3
Treater01@0.5'	05/13/22	2.1	No Staining	Organic Odor	Lab	40.66917825	-103.90084244	1.8
MH01@0.5'	05/13/22	0.3	No Staining	No Odor	Grab	40.66920675	-103.90080431	1.2
BH01@2.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66918002	-103.90117890	1.0
BH02@2.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66918563	-103.90113062	1.0
BG01@2.5'	05/13/22	0.0	No Staining	No Odor	Lab	40.66950526	-103.90099113	1.1
BG01@4'	05/13/22	0.1	No Staining	No Odor	Lab	40.66950526	-103.90099113	1.1
BG02@2.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66950359	-103.90091592	1.0
BG02@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66950359	-103.90091592	1.0
BG03@2.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66950829	-103.90085568	1.0
BG03@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66950829	-103.90085568	1.0
BG04@2.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66950522	-103.90078362	1.0
BG04@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66950522	-103.90078362	1.0
BG05@2.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66946766	-103.90088160	1.1
BG05@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66946766	-103.90088160	1.1
BG06@2.5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66946674	-103.90080054	1.1
BG06@5'	08/10/22	0.0	No Staining	No Odor	Lab	40.66946674	-103.90080054	1.1

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 P-7 FAC

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'	05/13/22	<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'	05/13/22	<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'	05/13/22	0.012	<0.0050	0.26	4.4	1.4	0.26	0.19	35	120	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0140	<0.00500	<0.00500	0.0459	<0.00500	0.00517	0.387	0.208
SS04@2.5'	05/13/22	<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@4'	05/13/22	<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
AST01@0.5'	05/13/22	<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
AST02@0.5'	05/13/22	<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
SEP01-FL@3'	05/13/22	<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
SEP01-DL@3'	05/13/22	<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
Treater01@0.5'	05/13/22	<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
BH01@2.5'	08/10/22	<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
BH02@2.5'	08/10/22	<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
BG01@2.5'	05/13/22	<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
BG01@4'	05/13/22	<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

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'	05/13/22	8.32	10.8	0.975	0.178
SS02@2.5'	05/13/22	8.34	10.6	0.587	0.158
SS03@2.5'	05/13/22	8.30	13.6	0.794	0.0765
SS04@2.5'	05/13/22	8.35	9.35	0.643	0.121
FS01@4'	05/13/22	8.32	11.9	0.516	0.177
AST01@0.5'	05/13/22	7.76	10.7	1.07	0.0838
AST02@0.5'	05/13/22	8.14	4.19	0.512	0.0730
SEP01-FL@3'	05/13/22	8.14	4.42	0.553	0.116
SEP01-DL@3'	05/13/22	8.10	2.62	0.486	0.129
Treater01@0.5'	05/13/22	8.12	12.7	0.497	0.213
BH01@2.5'	08/10/22	7.94	3.68	0.368	0.268
BH02@2.5'	08/10/22	7.82	2.76	0.249	0.242
BG01@2.5'	05/13/22	8.12	13.0	0.834	0.589
BG01@4'	05/13/22	8.21	12.1	1.42	0.342
BG02@2.5'	08/10/22	7.70	4.77	NA	NA
BG02@5'	08/10/22	7.52	6.07	NA	NA
BG03@2.5'	08/10/22	7.68	3.72	NA	NA
BG03@5'	08/10/22	7.48	4.83	NA	NA
BG04@2.5'	08/10/22	8.12	1.35	NA	NA
BG04@5'	08/10/22	7.46	4.39	NA	NA
BG05@2.5'	08/10/22	7.46	5.86	NA	NA
BG05@5'	08/10/22	7.55	6.68	NA	NA
BG06@2.5'	08/10/22	7.86	4.50	NA	NA
BG06@5'	08/10/22	7.66	6.04	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 SSL ^{1,3}		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
SS03@2.5'	05/13/22	4.75	102	0.426	<0.30	10.6	12.5	4.54	1.31	0.0437	12.1
BH01@2.5'	08/10/22	1.94	109	<0.268	<0.30	9.33	13.3	2.55	0.652	<0.0268	8.40
BH02@2.5'	08/10/22	1.60	43.1	0.862	<0.30	8.68	11.8	1.93	0.985	<0.0258	5.79
BG01@2.5'	05/13/22	4.62	213	0.273	<0.30	7.39	11.7	5.86	1.23	0.0482	19.9
BG02@2.5'	08/10/22	5.41	299	0.216	NA	NA	NA	NA	1.03	NA	NA
BG02@5'	08/10/22	3.09	133	0.239	NA	NA	NA	NA	1.14	NA	NA
BG03@2.5'	08/10/22	5.42	319	0.213	NA	NA	NA	NA	1.05	NA	NA
BG03@5'	08/10/22	2.86	155	0.238	NA	NA	NA	NA	1.12	NA	NA
BG04@2.5'	08/10/22	5.40	110	0.225	NA	NA	NA	NA	1.03	NA	NA
BG04@5'	08/10/22	3.34	111	0.257	NA	NA	NA	NA	1.17	NA	NA
BG05@2.5'	08/10/22	3.90	156	0.202	NA	NA	NA	NA	1.20	NA	NA
BG05@5'	08/10/22	2.95	142	0.265	NA	NA	NA	NA	1.19	NA	NA
BG06@2.5'	08/10/22	6.14	298	0.207	NA	NA	NA	NA	1.01	NA	NA
BG06@5'	08/10/22	3.22	132	0.220	NA	NA	NA	NA	1.23	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) for
- 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 = Millimhos per centimeter
 mg/L = Milligrams per liter
 < = Analytical result is less than the indicated laboratory reporting limit

1,2,4 - TMB = 1,2,4 Trimethylbenzene
 1,3,5 - TMB = 1,3,5 Trimethylbenzene
 Benz(a) = Benzantracene
 Benzo(b) = Benzofluoranthene
 Benzo(k) = Benzofluoranthene
 Benzo(a) = Benzopyrene
 A,H = Dibenzanthracene
 1,2,3-CD = Indenopyrene
 1-M = 1-methylnaphthalene
 2-M = 2-methylnaphthalene

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

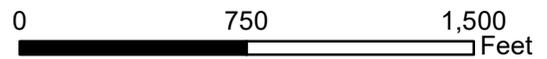
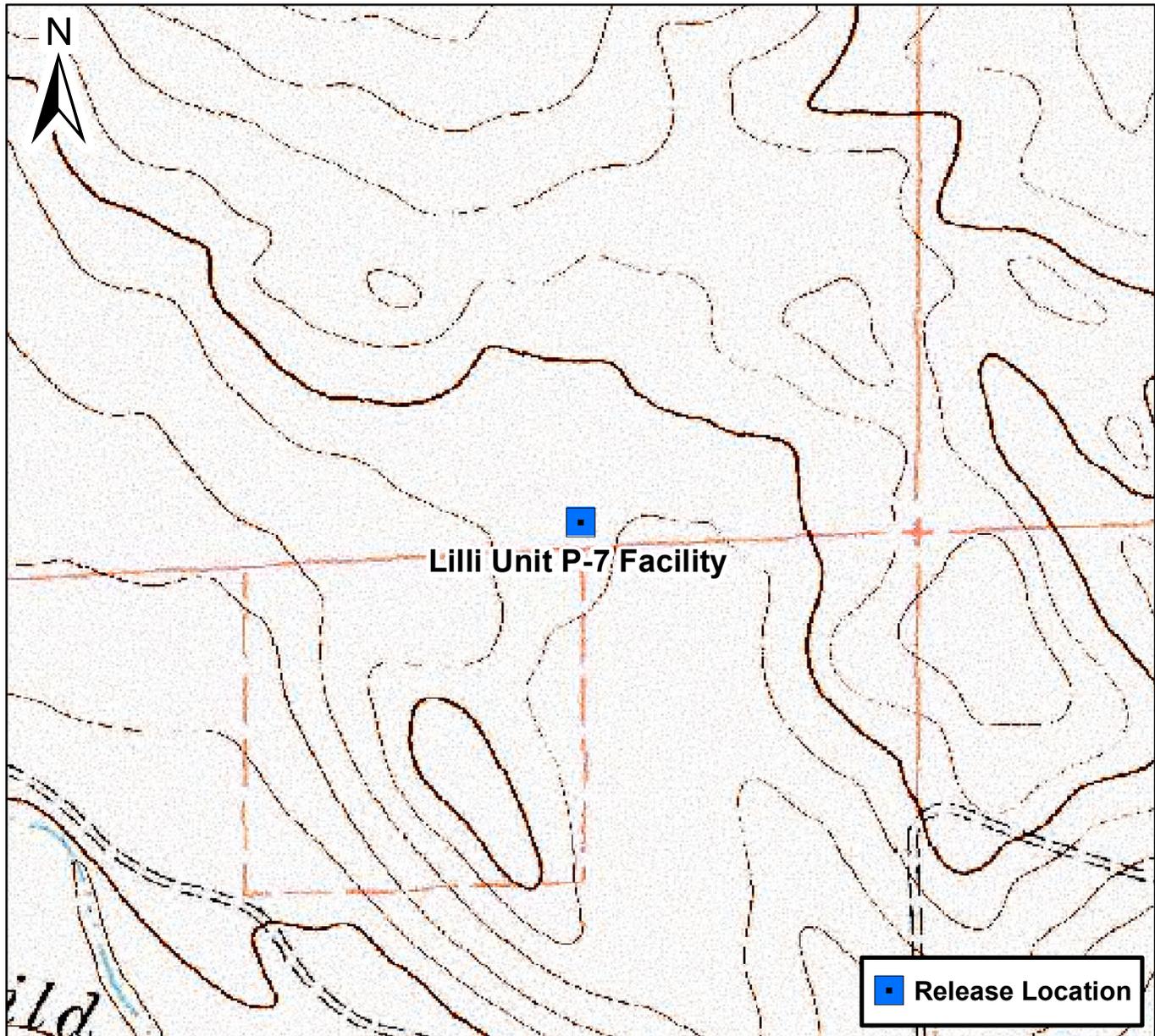
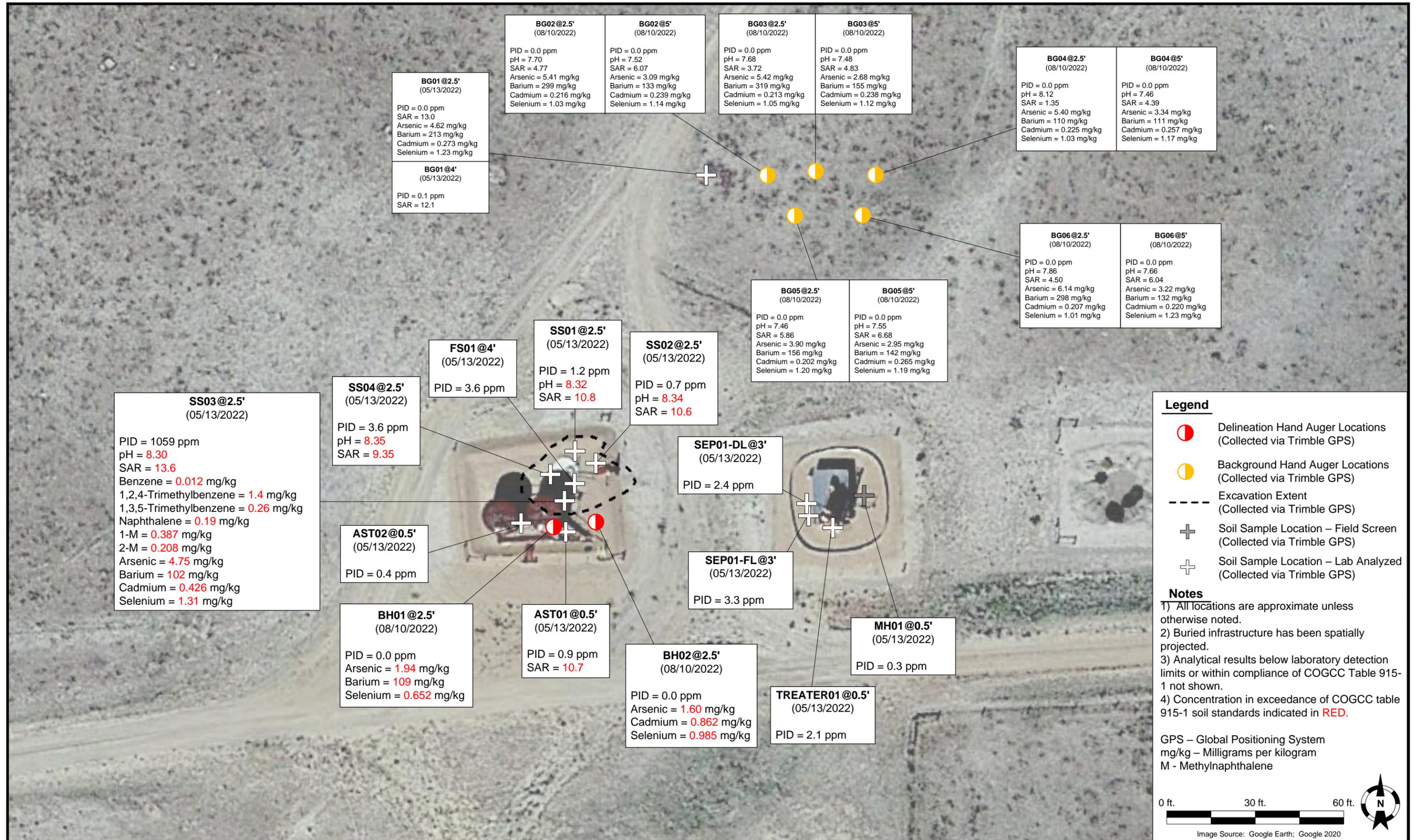


Figure 1

Site Location Map
 Lilli Unit P-7 Facility
 SWSE S7 T8N R58W
 Weld County, Colorado





DATE:	05/17/2022
DESIGNED BY:	JW
DRAWN BY:	AE

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

Noble Energy, Inc. – DJ Basin
Lilli Unit P-7 (FAC)
 SWSE, Section 7, Township 8 North, Range 58 West
 Weld County, Colorado

Facility Closure & Soil
 Analytical Results Map
 (5/13/2022 & 8/10/2022)

Figure 2

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

June 02, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

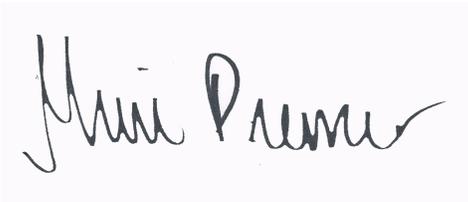
Broomfield, CO 80020

RE: Noble - Lilli Unit P-7 Facility

Work Order #2205251

Enclosed are the results of analyses for samples received by Summit Scientific on 05/13/22 18:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large initial "M" and a long, sweeping underline.

Muri Premer For Paul Shrewsbury

President



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

Project: Noble - Lilli Unit P-7 Facility

Project Number: UWRWE-A1941-ABN

Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@2.5'	2205251-01	Soil	05/13/22 14:00	05/13/22 18:30
SS02@2.5'	2205251-02	Soil	05/13/22 14:02	05/13/22 18:30
SS03@2.5'	2205251-03	Soil	05/13/22 14:04	05/13/22 18:30
SS04@2.5'	2205251-04	Soil	05/13/22 14:06	05/13/22 18:30
FS01@4'	2205251-05	Soil	05/13/22 14:08	05/13/22 18:30
AST01@0.5'	2205251-06	Soil	05/13/22 13:11	05/13/22 18:30
AST02@0.5'	2205251-07	Soil	05/13/22 13:14	05/13/22 18:30
SEP01-FL@3'	2205251-08	Soil	05/13/22 13:30	05/13/22 18:30
SEP01-DL@3'	2205251-09	Soil	05/13/22 13:38	05/13/22 18:30
Treater01@0.5'	2205251-10	Soil	05/13/22 15:51	05/13/22 18:30
BG01@2.5'	2205251-11	Soil	05/13/22 14:39	05/13/22 18:30
BG01@4'	2205251-12	Soil	05/13/22 14:42	05/13/22 18:30

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

S₂

2205251.1

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

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 P-7 Facility
Sampler Name: Stanley Gilbert	Project Number: UWRWE-A1941-ABN

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions	
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS		HOLD
1	SS01@2.5'	5/13/2022	14:00	2			X			X			X	X	X	X	X		results by COB Monday 16 th 2022 PH, SAR, EC BY SATURATED PASTE
2	SS02@2.5'	5/13/2022	14:02	2															
3	SS03@2.5'	5/13/2022	14:04	2															
4	SS04@2.5'	5/13/2022	14:06	2															
5	FS01@4'	5/13/2022	14:08	2															
6	AST01@0.5'	5/13/2022	13:11	2															
7	AST02@0.5'	5/13/2022	13:14	2															
8	SEP01-FL@3'	5/13/2022	13:30	2															
9	SEP01-DL@3'	5/13/2022	13:38	2															
10	Treater01@0.5'	5/13/2022	15:51	2															

Relinquished by: <i>[Signature]</i>	Date/Time: 5/13/22 18:30	Received by: <i>[Signature]</i>	Date/Time: 5/13/22 18:30	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours 24 hours <input type="checkbox"/> Standard 48 hours <input type="checkbox"/> Sample Integrity: Temperature Upon Receipt: _____ Samples Intact: Yes No	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by:	Date/Time:		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Summit Scientific

S₂

2205251.2

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

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 P-7 Facility
Sampler Name: Stanley Gilbert	Project Number: UWRWE-A1941-ABN

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested						Special Instructions			
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS		HOLD		
1	BG01@2.5'	5/13/2022	14:39	1			X			X				X	X	X	X	X		results by COB Monday 16 th 2022 PH, SAR, EC BY SATURATED PASTE	
2	BG01@4'	5/13/2022	14:42	1			X			X				X	X	X	X	X			
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: 	Date/Time: 5/13/22 18:30	Received by: Tasman's Lock Box	Date/Time: 5/13/22 18:30	Turn Around Time (Check)	Notes:
Relinquished by: Tasman's Lock Box	Date/Time:	Received by:	Date/Time:	Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	Sample Integrity:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt: _____	
				Samples Intact: Yes No	

S2 Work Order# 2205251**Sample Receipt Checklist**Client: Noble/Tasman Client Project ID: Lilli Unit P-7 FacilityShipped Via: H.D./P.U./FedEx/UPS/USPS/Other Airbill #: _____

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-------------------------------------	--------------------------	--------------------------	--------------------------	--------------------------

Matrix (Check all that apply) Air Soil/Solid Water Other Temp (°C) Thermometer #

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

Additional Comments (if any):

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

PS

 Custodian Printed Name

5/13/22

 Date/Time



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

Project: Noble - Lilli Unit P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS01@2.5'
2205251-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BFE0339	05/16/22	05/16/22	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: **05/13/22 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4		104 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		97.9 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BFE0340	05/16/22	05/16/22	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl		97.6 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS01@2.5'
2205251-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		74.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		83.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.178	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS01@2.5'
2205251-01 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	8620	0.0678	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	1060	0.0678	"	"	"	"	"	"	
Sodium	3980	0.0678	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	10.8	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.7		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.975	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 14:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.32		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS02@2.5'
2205251-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	05/16/22	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: **05/13/22 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		94.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS02@2.5'
2205251-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		60.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		71.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.158	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS02@2.5'
2205251-02 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	6210	0.0737	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	1010	0.0737	"	"	"	"	"	"	
Sodium	3430	0.0737	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	10.6	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	67.9		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.587	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 14:02**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS03@2.5'
2205251-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.012	0.0020	mg/kg	1	BFE0339	05/16/22	05/17/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.26	0.0050	"	"	"	"	"	"	
Xylenes (total)	4.4	0.10	"	10	"	"	"	"	
1,2,4-Trimethylbenzene	1.4	0.050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.26	0.0050	"	1	"	"	"	"	
Naphthalene	0.19	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	35	0.50	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		131 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		92.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	120	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS03@2.5'
2205251-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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	0.0140	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0459	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.00517	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.387	0.0500	"	10	"	"	"	"	
2-Methylnaphthalene	0.208	0.0500	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		85.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0765	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS03@2.5'
2205251-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	4.75	0.281	mg/kg dry	1	BFE0622	05/26/22	05/30/22	EPA 6020B
Barium	102	0.562	"	"	"	"	"	"
Cadmium	0.426	0.281	"	"	"	"	"	"
Copper	10.6	0.562	"	"	"	"	"	"
Lead	12.5	0.281	"	"	"	"	"	"
Nickel	4.54	0.562	"	"	"	"	"	"
Selenium	1.31	0.365	"	"	"	"	"	"
Silver	0.0437	0.0281	"	"	"	"	"	"
Zinc	12.1	0.562	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0728	05/28/22	05/31/22	EPA 7196A	

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

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	5660	0.0702	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	848	0.0702	"	"	"	"	"	"	
Sodium	4160	0.0702	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	13.6	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS03@2.5'
2205251-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	71.2	%	1	BFE0423	05/19/22	05/19/22	Calculation
-----------------	-------------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.794	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 14:04**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.30		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS04@2.5'
2205251-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	05/16/22	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: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		98.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS04@2.5'
2205251-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		73.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.121	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SS04@2.5'
2205251-04 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	5280	0.0698	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	1130	0.0698	"	"	"	"	"	"	
Sodium	2870	0.0698	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	9.35	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	71.6		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.643	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 14:06**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.35		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

FS01@4'
2205251-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	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: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

FS01@4'
2205251-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		65.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		72.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.177	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

FS01@4'
2205251-05 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	5860	0.0674	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	965	0.0674	"	"	"	"	"	"	
Sodium	3730	0.0674	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.9	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	74.2		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.516	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 14:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.32		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

AST01@0.5'
2205251-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	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: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		96.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		97.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

AST01@0.5'
2205251-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		67.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0838	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

AST01@0.5'
2205251-06 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4600	0.0643	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	976	0.0643	"	"	"	"	"	"	
Sodium	3060	0.0643	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	10.7	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.8		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.07	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.76		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

AST02@0.5'
2205251-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	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: **05/13/22 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		94.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/16/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		105 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

AST02@0.5'
2205251-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		77.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0730	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

AST02@0.5'
2205251-07 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	11300	0.0661	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	1160	0.0661	"	"	"	"	"	"	
Sodium	1750	0.0661	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.19	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.7		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.512	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 13:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SEP01-FL@3'
2205251-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	05/16/22	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: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.5 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 13:30**

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

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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SEP01-FL@3'
2205251-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		62.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.116	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SEP01-FL@3'
2205251-08 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	3750	0.0651	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	730	0.0651	"	"	"	"	"	"	
Sodium	1130	0.0651	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.42	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.8		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.553	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 13:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SEP01-DL@3'
2205251-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	05/16/22	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: **05/13/22 13:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		83.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 13:38**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SEP01-DL@3'
2205251-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		65.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		74.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.129	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

SEP01-DL@3'
2205251-09 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4210	0.0642	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	795	0.0642	"	"	"	"	"	"	
Sodium	708	0.0642	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.62	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	77.8		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.486	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 13:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Treater01@0.5'
2205251-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	05/16/22	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: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 15:51**

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

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Treater01@0.5'
2205251-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		78.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0213	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Treater01@0.5'
2205251-10 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4670	0.0651	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	637	0.0651	"	"	"	"	"	"	
Sodium	740	0.0651	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	12.7	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.8		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.497	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 15:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

BG01@2.5'
2205251-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	05/16/22	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: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		86.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		102 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

BG01@2.5'
2205251-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		63.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.598	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

BG01@2.5'
2205251-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	4.62	0.233	mg/kg dry	1	BFE0622	05/26/22	05/30/22	EPA 6020B	
Barium	213	0.466	"	"	"	"	"	"	
Cadmium	0.273	0.233	"	"	"	"	"	"	
Copper	7.39	0.466	"	"	"	"	"	"	
Lead	11.7	0.233	"	"	"	"	"	"	
Nickel	5.86	0.466	"	"	"	"	"	"	
Selenium	1.23	0.303	"	"	"	"	"	"	
Silver	0.0482	0.0233	"	"	"	"	"	"	
Zinc	19.9	0.466	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFE0728	05/28/22	05/31/22	EPA 7196A	

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

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	2540	0.0582	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	510	0.0582	"	"	"	"	"	"	
Sodium	6250	0.0582	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	13.0	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

BG01@2.5'
2205251-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	85.9	%	1	BFE0423	05/19/22	05/19/22	Calculation
-----------------	-------------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.834	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 14:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.12		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

BG01@4'
2205251-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFE0339	05/16/22	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: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		84.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0340	05/16/22	05/17/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

BG01@4'
2205251-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0343	05/17/22	05/21/22	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: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		69.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.342	0.0100	mg/L	1	BFE0347	05/17/22	05/22/22	EPA 6020B	

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

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

BG01@4'
2205251-12 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	6210	0.0580	mg/L dry	1	BFE0348	05/17/22	05/22/22	EPA 6020B	
Magnesium	629	0.0580	"	"	"	"	"	"	
Sodium	3750	0.0580	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	12.1	0.00100	units	1	BFE0483	05/22/22	05/22/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.1		%	1	BFE0423	05/19/22	05/19/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.42	0.0100	mmhos/cm	1	BFE0395	05/18/22	05/20/22	EPA 120.1	

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

Date Sampled: **05/13/22 14:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.21		pH Units	1	BFE0394	05/18/22	05/20/22	EPA 9045D	

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFE0339 - EPA 5030 Soil MS

Blank (BFE0339-BLK1)

Prepared & Analyzed: 05/16/22

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	0.0399		"	0.0400		99.8	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.6	50-150			

LCS (BFE0339-BS1)

Prepared & Analyzed: 05/16/22

Benzene	0.0587	0.0020	mg/kg	0.0750		78.2	70-130			
Toluene	0.0619	0.0050	"	0.0750		82.5	70-130			
Ethylbenzene	0.0591	0.0050	"	0.0750		78.8	70-130			
m,p-Xylene	0.137	0.010	"	0.150		91.5	70-130			
o-Xylene	0.0644	0.0050	"	0.0750		85.8	70-130			
1,2,4-Trimethylbenzene	0.0607	0.0050	"	0.0750		80.9	70-130			
1,3,5-Trimethylbenzene	0.0602	0.0050	"	0.0750		80.3	70-130			
Naphthalene	0.0753	0.0038	"	0.0750		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0369		"	0.0400		92.3	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.8	50-150			

Matrix Spike (BFE0339-MS1)

Source: 2205237-01

Prepared: 05/16/22 Analyzed: 05/17/22

Benzene	0.0632	0.0020	mg/kg	0.0750	ND	84.3	70-130			
Toluene	0.0643	0.0050	"	0.0750	ND	85.7	70-130			
Ethylbenzene	0.0588	0.0050	"	0.0750	ND	78.4	70-130			
m,p-Xylene	0.138	0.010	"	0.150	ND	91.9	70-130			
o-Xylene	0.0662	0.0050	"	0.0750	ND	88.2	70-130			
1,2,4-Trimethylbenzene	0.0628	0.0050	"	0.0750	ND	83.7	70-130			
1,3,5-Trimethylbenzene	0.0612	0.0050	"	0.0750	ND	81.6	70-130			
Naphthalene	0.0787	0.0038	"	0.0750	ND	105	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0400		99.4	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0396		"	0.0400		98.9	50-150			

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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

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

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

Batch BFE0339 - EPA 5030 Soil MS

Matrix Spike Dup (BFE0339-MSD1)	Source: 2205237-01			Prepared: 05/16/22 Analyzed: 05/17/22						
Benzene	0.0609	0.0020	mg/kg	0.0750	ND	81.2	70-130	3.67	30	
Toluene	0.0642	0.0050	"	0.0750	ND	85.6	70-130	0.187	30	
Ethylbenzene	0.0593	0.0050	"	0.0750	ND	79.0	70-130	0.813	30	
m,p-Xylene	0.139	0.010	"	0.150	ND	92.4	70-130	0.521	30	
o-Xylene	0.0660	0.0050	"	0.0750	ND	88.0	70-130	0.272	30	
1,2,4-Trimethylbenzene	0.0634	0.0050	"	0.0750	ND	84.5	70-130	0.951	30	
1,3,5-Trimethylbenzene	0.0615	0.0050	"	0.0750	ND	82.0	70-130	0.538	30	
Naphthalene	0.0875	0.0038	"	0.0750	ND	117	70-130	10.6	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0408</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFE0340 - EPA 3550A

Blank (BFE0340-BLK1)

Prepared: 05/16/22 Analyzed: 05/17/22

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

LCS (BFE0340-BS1)

Prepared: 05/16/22 Analyzed: 05/17/22

C10-C28 (DRO)	481	50	mg/kg	500	96.2	70-130				
---------------	-----	----	-------	-----	------	--------	--	--	--	--

Matrix Spike (BFE0340-MS1)

Source: 2205237-01

Prepared: 05/16/22 Analyzed: 05/17/22

C10-C28 (DRO)	489	50	mg/kg	500	28.4	92.0	70-130			
---------------	-----	----	-------	-----	------	------	--------	--	--	--

Matrix Spike Dup (BFE0340-MSD1)

Source: 2205237-01

Prepared: 05/16/22 Analyzed: 05/17/22

C10-C28 (DRO)	462	50	mg/kg	500	28.4	86.7	70-130	5.56	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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

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

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

Batch BFE0343 - EPA 5030 Soil MS

Blank (BFE0343-BLK1)

Prepared: 05/17/22 Analyzed: 05/21/22

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0315</i>		"	<i>0.0333</i>		<i>94.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0312</i>		"	<i>0.0333</i>		<i>93.5</i>	<i>40-150</i>			

LCS (BFE0343-BS1)

Prepared: 05/17/22 Analyzed: 05/21/22

Acenaphthene	0.0307	0.00500	mg/kg	0.0333		92.2	31-137			
Anthracene	0.0327	0.00500	"	0.0333		98.1	30-120			
Benzo (a) anthracene	0.0371	0.00500	"	0.0333		111	30-120			
Benzo (a) pyrene	0.0290	0.00500	"	0.0333		87.0	30-120			
Benzo (b) fluoranthene	0.0324	0.00500	"	0.0333		97.1	30-120			
Benzo (k) fluoranthene	0.0325	0.00500	"	0.0333		97.4	30-120			
Chrysene	0.0337	0.00500	"	0.0333		101	30-120			
Dibenz (a,h) anthracene	0.0229	0.00500	"	0.0333		68.6	30-120			
Fluoranthene	0.0338	0.00500	"	0.0333		101	30-120			
Fluorene	0.0307	0.00500	"	0.0333		92.0	30-120			
Indeno (1,2,3-cd) pyrene	0.0305	0.00500	"	0.0333		91.4	30-120			
Pyrene	0.0353	0.00500	"	0.0333		106	35-142			
1-Methylnaphthalene	0.0406	0.00500	"	0.0333		122	35-142			
2-Methylnaphthalene	0.0307	0.00500	"	0.0333		92.2	35-142			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0305</i>		"	<i>0.0333</i>		<i>91.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0374</i>		"	<i>0.0333</i>		<i>112</i>	<i>40-150</i>			

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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFE0343 - EPA 5030 Soil MS

Matrix Spike (BFE0343-MS1)	Source: 2205241-01			Prepared: 05/17/22 Analyzed: 05/21/22						
Acenaphthene	0.0185	0.00500	mg/kg	0.0333	ND	55.5	31-137			
Anthracene	0.0190	0.00500	"	0.0333	ND	57.0	30-120			
Benzo (a) anthracene	0.0206	0.00500	"	0.0333	ND	61.8	30-120			
Benzo (a) pyrene	0.0154	0.00500	"	0.0333	ND	46.2	30-120			
Benzo (b) fluoranthene	0.0174	0.00500	"	0.0333	ND	52.2	30-120			
Benzo (k) fluoranthene	0.0170	0.00500	"	0.0333	ND	51.0	30-120			
Chrysene	0.0178	0.00500	"	0.0333	ND	53.4	30-120			
Dibenz (a,h) anthracene	0.0123	0.00500	"	0.0333	ND	36.8	30-120			
Fluoranthene	0.0188	0.00500	"	0.0333	ND	56.4	30-120			
Fluorene	0.0174	0.00500	"	0.0333	ND	52.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0150	0.00500	"	0.0333	ND	45.0	30-120			
Pyrene	0.0190	0.00500	"	0.0333	ND	56.9	35-142			
1-Methylnaphthalene	0.0119	0.00500	"	0.0333	ND	35.6	15-130			
2-Methylnaphthalene	0.0184	0.00500	"	0.0333	ND	55.3	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0152</i>		<i>"</i>	<i>0.0333</i>		<i>45.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0213</i>		<i>"</i>	<i>0.0333</i>		<i>63.8</i>	<i>40-150</i>			

Matrix Spike Dup (BFE0343-MSD1)	Source: 2205241-01			Prepared: 05/17/22 Analyzed: 05/21/22						
Acenaphthene	0.0204	0.00500	mg/kg	0.0333	ND	61.2	31-137	9.68	30	
Anthracene	0.0209	0.00500	"	0.0333	ND	62.7	30-120	9.41	30	
Benzo (a) anthracene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	15.6	30	
Benzo (a) pyrene	0.0184	0.00500	"	0.0333	ND	55.2	30-120	17.8	30	
Benzo (b) fluoranthene	0.0200	0.00500	"	0.0333	ND	60.0	30-120	14.0	30	
Benzo (k) fluoranthene	0.0193	0.00500	"	0.0333	ND	57.8	30-120	12.5	30	
Chrysene	0.0211	0.00500	"	0.0333	ND	63.2	30-120	16.8	30	
Dibenz (a,h) anthracene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	19.7	30	
Fluoranthene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	14.5	30	
Fluorene	0.0198	0.00500	"	0.0333	ND	59.3	30-120	12.5	30	
Indeno (1,2,3-cd) pyrene	0.0195	0.00500	"	0.0333	ND	58.6	30-120	26.2	30	
Pyrene	0.0225	0.00500	"	0.0333	ND	67.4	35-142	17.0	30	
1-Methylnaphthalene	0.0185	0.00500	"	0.0333	ND	55.4	15-130	43.5	50	
2-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.9	15-130	14.4	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0201</i>		<i>"</i>	<i>0.0333</i>		<i>60.2</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0249</i>		<i>"</i>	<i>0.0333</i>		<i>74.6</i>	<i>40-150</i>			

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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

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

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

Batch BFE0347 - EPA 3050B

Blank (BFE0347-BLK1)

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

Boron ND 0.0100 mg/L

LCS (BFE0347-BS1)

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

Boron 5.54 0.0100 mg/L 5.00 111 80-120

Duplicate (BFE0347-DUP1)

Source: 2205186-01

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

Boron 0.0130 0.0100 mg/L 0.0155 17.3 20

Matrix Spike (BFE0347-MS1)

Source: 2205186-01

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

Boron 5.34 0.0100 mg/L 5.00 0.0155 106 75-125

Matrix Spike Dup (BFE0347-MSD1)

Source: 2205186-01

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

Boron 5.31 0.0100 mg/L 5.00 0.0155 106 75-125 0.527 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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFE0622 - EPA 3050B

Blank (BFE0622-BLK1)

Prepared: 05/26/22 Analyzed: 05/30/22

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 (BFE0622-BS1)

Prepared: 05/26/22 Analyzed: 05/30/22

Arsenic	41.9	0.200	mg/kg wet	40.0	105	80-120
Barium	46.3	0.400	"	40.0	116	80-120
Cadmium	2.33	0.200	"	2.00	117	80-120
Copper	41.6	0.400	"	40.0	104	80-120
Lead	22.3	0.200	"	20.0	112	80-120
Nickel	39.0	0.400	"	40.0	97.6	80-120
Selenium	4.10	0.260	"	4.00	102	80-120
Silver	2.29	0.0200	"	2.00	115	80-120
Zinc	42.7	0.400	"	40.0	107	80-120

Duplicate (BFE0622-DUP1)

Source: 2204340-04

Prepared: 05/26/22 Analyzed: 05/30/22

Arsenic	1.66	0.205	mg/kg dry	1.63	1.49	20
Barium	52.6	0.409	"	54.4	3.46	20
Cadmium	0.127	0.205	"	0.127	0.306	20
Copper	5.79	0.409	"	5.94	2.68	20
Lead	5.60	0.205	"	5.67	1.28	20
Nickel	6.16	0.409	"	6.26	1.60	20
Selenium	0.430	0.266	"	0.445	3.50	20
Silver	0.0239	0.0205	"	0.0249	3.98	20
Zinc	25.2	0.409	"	25.6	1.59	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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFE0622 - EPA 3050B

Matrix Spike (BFE0622-MS1)

Source: 2204340-04

Prepared: 05/26/22 Analyzed: 05/30/22

Arsenic	41.7	0.205	mg/kg dry	40.9	1.63	97.8	75-125			
Barium	99.9	0.409	"	40.9	54.4	111	75-125			
Cadmium	2.39	0.205	"	2.05	0.127	110	75-125			
Copper	44.9	0.409	"	40.9	5.94	95.3	75-125			
Lead	26.2	0.205	"	20.5	5.67	100	75-125			
Nickel	43.8	0.409	"	40.9	6.26	91.7	75-125			
Selenium	3.97	0.266	"	4.09	0.445	86.1	75-125			
Silver	2.19	0.0205	"	2.05	0.0249	106	75-125			
Zinc	67.8	0.409	"	40.9	25.6	103	75-125			

Matrix Spike Dup (BFE0622-MSD1)

Source: 2204340-04

Prepared: 05/26/22 Analyzed: 05/30/22

Arsenic	45.2	0.205	mg/kg dry	40.9	1.63	106	75-125	8.00	25
Barium	98.6	0.409	"	40.9	54.4	108	75-125	1.26	25
Cadmium	2.33	0.205	"	2.05	0.127	108	75-125	2.25	25
Copper	49.3	0.409	"	40.9	5.94	106	75-125	9.16	25
Lead	25.3	0.205	"	20.5	5.67	96.0	75-125	3.20	25
Nickel	47.9	0.409	"	40.9	6.26	102	75-125	8.90	25
Selenium	3.86	0.266	"	4.09	0.445	83.3	75-125	2.95	25
Silver	2.14	0.0205	"	2.05	0.0249	103	75-125	2.30	25
Zinc	73.7	0.409	"	40.9	25.6	118	75-125	8.27	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 P-7 Facility
Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFE0728 - 3060A Mod

Blank (BFE0728-BLK1)

Prepared: 05/28/22 Analyzed: 05/31/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFE0728-BS1)

Prepared: 05/28/22 Analyzed: 05/31/22

Chromium, Hexavalent 25.9 0.30 mg/kg wet 25.0 104 80-120

Duplicate (BFE0728-DUP1)

Source: 2205237-01

Prepared: 05/28/22 Analyzed: 05/31/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFE0728-MS1)

Source: 2205237-01

Prepared: 05/28/22 Analyzed: 05/31/22

Chromium, Hexavalent 37.4 0.30 mg/kg dry 31.1 ND 120 75-125

Matrix Spike Dup (BFE0728-MSD1)

Source: 2205237-01

Prepared: 05/28/22 Analyzed: 05/31/22

Chromium, Hexavalent 37.2 0.30 mg/kg dry 31.1 ND 120 75-125 0.500 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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

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

Summit Scientific

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

Batch BFE0348 - General Preparation

Blank (BFE0348-BLK1)

Prepared: 05/17/22 Analyzed: 05/21/22

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

LCS (BFE0348-BS1)

Prepared: 05/17/22 Analyzed: 05/21/22

Calcium	5.52	0.0500	mg/L wet	5.00	110	70-130				
Magnesium	5.30	0.0500	"	5.00	106	70-130				
Sodium	5.05	0.0500	"	5.00	101	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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

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

Summit Scientific

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

Batch BFE0423 - General Preparation

Duplicate (BFE0423-DUP1)

Source: 2205237-01

Prepared & Analyzed: 05/19/22

% Solids	80.8		%		80.3			0.583		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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

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

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

Batch BFE0395 - General Preparation

Blank (BFE0395-BLK1)

Prepared: 05/18/22 Analyzed: 05/20/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFE0395-BS1)

Prepared: 05/18/22 Analyzed: 05/20/22

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BFE0395-DUP1)

Source: 2205237-01

Prepared: 05/18/22 Analyzed: 05/20/22

Specific Conductance (EC) 1.13 0.0100 mmhos/cm 1.12 0.534 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 P-7 Facility

Project Number: UWRWE-A1941-ABN
Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

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

Summit Scientific

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

Batch BFE0394 - General Preparation

LCS (BFE0394-BS1)

Prepared: 05/18/22 Analyzed: 05/20/22

pH	9.11	pH Units	9.18	99.2	95-105
----	------	----------	------	------	--------

Duplicate (BFE0394-DUP1)

Source: 2205237-01

Prepared: 05/18/22 Analyzed: 05/20/22

pH	8.13	pH Units	8.15	0.246	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 P-7 Facility

Project Number: UWRWE-A1941-ABN

Project Manager: Jacob Whritenour

Reported:
06/02/22 15:29

Notes and Definitions

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 P-7 Facility
Work Order #2208150

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BG02@2.5'	2208150-01	Soil	08/10/22 11:00	08/10/22 17:22
BG02@5'	2208150-02	Soil	08/10/22 11:05	08/10/22 17:22
BG03@2.5'	2208150-03	Soil	08/10/22 11:10	08/10/22 17:22
BG03@5'	2208150-04	Soil	08/10/22 11:15	08/10/22 17:22
BG04@2.5'	2208150-05	Soil	08/10/22 11:20	08/10/22 17:22
BG04@5'	2208150-06	Soil	08/10/22 11:25	08/10/22 17:22
BG05@2.5'	2208150-07	Soil	08/10/22 11:30	08/10/22 17:22
BG05@5'	2208150-08	Soil	08/10/22 11:35	08/10/22 17:22
BG06@2.5'	2208150-09	Soil	08/10/22 11:40	08/10/22 17:22
BG06@5'	2208150-10	Soil	08/10/22 11:45	08/10/22 17:22
BH01@2.5'	2208150-11	Soil	08/10/22 11:50	08/10/22 17:22
BH02@2.5'	2208150-12	Soil	08/10/22 11:55	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

2208150.1

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: Lilli Unit P-7
Sampler Name: Stanley Gilbert Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC , SAR	Boron - HWS	HOLD	Arsenic, Barium		Cadmium, Selenium	
1	RG02@2.5'	8/10/22	1100	1			X			X							X			X	X	pH, EC, SAR by saturated paste
2	BG02@5'		1105														X					
3	BG03@2.5'		1110														X					
4	BG03@5'		1115														X					
5	BG04@2.5'		1120														X					
6	BG04@5'		1125														X					
7	BG05@2.5'		1130														X					
8	BG05@5'		1135														X					
9	BG06@2.5'		1140														X					
10	BG06@5'		1145														X					

Relinquished by: <u>Mr. Noble</u>	Date/Time: <u>8/10/22 17:05</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: <u>8/10/22 17:05</u>	Turn Around Time (Check)	Notes:
				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"/>	
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: <u>8/10/22 17:22</u>	Received by: <u>[Signature]</u>	Date/Time: <u>8/10/22 17:22</u>	Sample Integrity:	
				Temperature Upon Receipt: <u>10.1</u>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

Summit Scientific

2208150.2

S₂

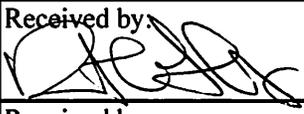
4653 Table Mountain Drive ♦ Golden, Colorado 80403

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: Gill; Unit P-7
 Sampler Name: Stanley Gilbert Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	Mals - 915			
1	BH01 @ 2.5'	8/10/22	1150	2			X			X				X	X	X	X	X	X	X		pH, EC, SAR by saturated paste
2	BH02 @ 2.5'	↓	1155	2			X			X				X	X	X	X	X	X	X		
3																						
4																						
5																						
6																						
7																						
8																						
9																						
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)	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 8/10/22 17:22	Received by: 	Date/Time: 8/10/22 17:22	Same Day <input type="checkbox"/> 72 hours <input checked="" type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
				48 hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: 10.1	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

2/2
Sample Receipt Checklist

S2 Work Order# 2208150

Client: Ndale/Tasman Client Project ID: Lilli unit 8-7

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

--	--	--	--	--

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

Temp (°C) 10.1 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

81022
Date/Time



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

Project: Noble - Lilli Unit P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG02@2.5'
2208150-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.41	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	299	0.400	"	"	"	"	"	"	
Cadmium	0.216	0.200	"	"	"	"	"	"	
Selenium	1.03	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	34.7	0.0595	mg/L dry	1	BFH0273	08/12/22	08/15/22	EPA 6020B	
Magnesium	8.02	0.0595	"	"	"	"	"	"	
Sodium	120	0.0595	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.77	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.0		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.70		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG02@2.5'
2208150-01 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG02@5'
2208150-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.09	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	113	0.400	"	"	"	"	"	"	
Cadmium	0.239	0.200	"	"	"	"	"	"	
Selenium	1.14	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	152	0.0613	mg/L dry	1	BFH0273	08/12/22	08/15/22	EPA 6020B	
Magnesium	24.5	0.0613	"	"	"	"	"	"	
Sodium	306	0.0613	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	6.07	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.5		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:05**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.52		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG02@5'
2208150-02 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG03@2.5'
2208150-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.42	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	319	0.400	"	"	"	"	"	"	
Cadmium	0.213	0.200	"	"	"	"	"	"	
Selenium	1.05	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	29.4	0.0597	mg/L dry	1	BFH0273	08/12/22	08/15/22	EPA 6020B	
Magnesium	6.46	0.0597	"	"	"	"	"	"	
Sodium	85.5	0.0597	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	3.72	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	83.8		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:10**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.68		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG03@2.5'
2208150-03 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG03@5'
2208150-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.86	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	155	0.400	"	"	"	"	"	"	
Cadmium	0.238	0.200	"	"	"	"	"	"	
Selenium	1.12	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	132	0.0609	mg/L dry	1	BFH0273	08/12/22	08/15/22	EPA 6020B	
Magnesium	18.8	0.0609	"	"	"	"	"	"	
Sodium	224	0.0609	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.83	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.1		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:15**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.48		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG03@5'
2208150-04 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG04@2.5'
2208150-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	5.40	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	110	0.400	"	"	"	"	"	"	
Cadmium	0.225	0.200	"	"	"	"	"	"	
Selenium	1.03	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	9.35	0.0590	mg/L dry	1	BFH0273	08/12/22	08/15/22	EPA 6020B	
Magnesium	2.44	0.0590	"	"	"	"	"	"	
Sodium	17.9	0.0590	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	1.35	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.7		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:20**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.12		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG04@2.5'
2208150-05 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG04@5'
2208150-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.34	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	111	0.400	"	"	"	"	"	"	
Cadmium	0.257	0.200	"	"	"	"	"	"	
Selenium	1.17	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	316	0.0604	mg/L dry	1	BFH0273	08/12/22	08/15/22	EPA 6020B	
Magnesium	40.4	0.0604	"	"	"	"	"	"	
Sodium	312	0.0604	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.39	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	82.8		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:25**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.46		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG04@5'
2208150-06 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG05@2.5'
2208150-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.90	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	156	0.400	"	"	"	"	"	"	
Cadmium	0.202	0.200	"	"	"	"	"	"	
Selenium	1.20	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	406	0.0613	mg/L dry	1	BFH0273	08/12/22	08/15/22	EPA 6020B	
Magnesium	62.2	0.0613	"	"	"	"	"	"	
Sodium	480	0.0613	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	5.86	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.5		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.46		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG05@2.5'
2208150-07 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG05@5'
2208150-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	2.95	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	142	0.400	"	"	"	"	"	"	
Cadmium	0.265	0.200	"	"	"	"	"	"	
Selenium	1.19	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	159	0.0613	mg/L dry	1	BFH0273	08/12/22	08/16/22	EPA 6020B	
Magnesium	25.5	0.0613	"	"	"	"	"	"	
Sodium	344	0.0613	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	6.68	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.6		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.55		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG05@5'
2208150-08 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG06@2.5'
2208150-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	6.14	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	298	0.400	"	"	"	"	"	"	
Cadmium	0.207	0.200	"	"	"	"	"	"	
Selenium	1.01	0.260	"	"	"	"	"	"	

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

Date Sampled: **08/10/22 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	26.0	0.0593	mg/L dry	1	BFH0273	08/12/22	08/16/22	EPA 6020B	
Magnesium	6.17	0.0593	"	"	"	"	"	"	
Sodium	98.2	0.0593	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	4.50	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	84.3		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.86		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG06@2.5'
2208150-09 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG06@5'
2208150-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	3.22	0.200	mg/kg dry	1	BFH0248	08/11/22	08/13/22	EPA 6020B	
Barium	132	0.400	"	"	"	"	"	"	"
Cadmium	0.220	0.200	"	"	"	"	"	"	"
Selenium	1.23	0.260	"	"	"	"	"	"	"

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

Date Sampled: **08/10/22 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	207	0.0613	mg/L dry	1	BFH0273	08/12/22	08/16/22	EPA 6020B	
Magnesium	31.3	0.0613	"	"	"	"	"	"	"
Sodium	353	0.0613	"	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **08/10/22 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	6.04	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	81.6		%	1	BFH0270	08/12/22	08/12/22	Calculation	

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

Date Sampled: **08/10/22 11:45**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	7.66		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BG06@5'
2208150-10 (Soil)

Summit Scientific

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH01@2.5'
2208150-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0261	08/12/22	08/12/22	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: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		93.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		85.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0262	08/12/22	08/16/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		56.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH01@2.5'
2208150-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0234	08/11/22	08/11/22	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: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		70.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		57.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.268	0.0100	mg/L	1	BFH0269	08/12/22	08/13/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH01@2.5'
2208150-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.94	0.268	mg/kg dry	1	BFH0222	08/11/22	08/12/22	EPA 6020B	
Barium	109	0.536	"	"	"	"	"	"	
Cadmium	ND	0.268	"	"	"	"	"	"	
Copper	9.33	0.536	"	"	"	"	"	"	
Lead	13.3	0.268	"	"	"	"	"	"	
Nickel	2.55	0.536	"	"	"	"	"	"	
Selenium	0.652	0.349	"	"	"	"	"	"	
Silver	ND	0.0268	"	"	"	"	"	"	
Zinc	8.40	0.536	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFH0241	08/11/22	08/12/22	EPA 7196A	

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

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	16.4	0.0670	mg/L dry	1	BFH0273	08/12/22	08/16/22	EPA 6020B	
Magnesium	5.23	0.0670	"	"	"	"	"	"	
Sodium	66.9	0.0670	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.68	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH01@2.5'
2208150-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	74.6			%	1	BFH0237	08/11/22	08/11/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.368	0.0100		mmhos/cm	1	BFH0286	08/15/22	08/15/22	EPA 120.1	

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

Date Sampled: **08/10/22 11:50**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.94			pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH02@2.5'
2208150-12 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFH0261	08/12/22	08/12/22	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: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		97.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		92.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		87.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFH0262	08/12/22	08/16/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		68.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



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

Project: Noble - Lilli Unit P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH02@2.5'
2208150-12 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFH0234	08/11/22	08/11/22	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: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		66.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		64.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.242	0.0100	mg/L	1	BFH0269	08/12/22	08/13/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH02@2.5'
2208150-12 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.60	0.258	mg/kg dry	1	BFH0222	08/11/22	08/12/22	EPA 6020B	
Barium	43.1	0.516	"	"	"	"	"	"	
Cadmium	0.862	0.258	"	"	"	"	"	"	
Copper	8.68	0.516	"	"	"	"	"	"	
Lead	11.8	0.258	"	"	"	"	"	"	
Nickel	1.93	0.516	"	"	"	"	"	"	
Selenium	0.985	0.336	"	"	"	"	"	"	
Silver	ND	0.0258	"	"	"	"	"	"	
Zinc	5.79	0.516	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFH0241	08/11/22	08/12/22	EPA 7196A	

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

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	11.5	0.0645	mg/L dry	1	BFH0273	08/12/22	08/16/22	EPA 6020B	
Magnesium	3.45	0.0645	"	"	"	"	"	"	
Sodium	41.6	0.0645	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.76	0.00100	units	1	BFH0318	08/16/22	08/16/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

BH02@2.5'
2208150-12 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	77.5	%	1	BFH0237	08/11/22	08/11/22	Calculation
----------	------	---	---	---------	----------	----------	-------------

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.249	0.0100	mmhos/cm	1	BFH0286	08/15/22	08/15/22	EPA 120.1	

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

Date Sampled: **08/10/22 11:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BFH0287	08/15/22	08/15/22	EPA 9045D	

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFH0261 - EPA 5030 Soil MS

Blank (BFH0261-BLK1)

Prepared & Analyzed: 08/12/22

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0332		"	0.0400		82.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0370		"	0.0400		92.5	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0337		"	0.0400		84.2	50-150			

LCS (BFH0261-BS1)

Prepared & Analyzed: 08/12/22

Benzene	0.0675	0.0020	mg/kg	0.0750		90.0	70-130			
Toluene	0.0696	0.0050	"	0.0750		92.8	70-130			
Ethylbenzene	0.0770	0.0050	"	0.0750		103	70-130			
m,p-Xylene	0.151	0.010	"	0.150		101	70-130			
o-Xylene	0.0728	0.0050	"	0.0750		97.1	70-130			
1,2,4-Trimethylbenzene	0.0738	0.0050	"	0.0750		98.4	70-130			
1,3,5-Trimethylbenzene	0.0764	0.0050	"	0.0750		102	70-130			
Naphthalene	0.0794	0.0038	"	0.0750		106	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0329		"	0.0400		82.3	50-150			
<i>Surrogate: Toluene-d8</i>	0.0381		"	0.0400		95.3	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0352		"	0.0400		88.0	50-150			

Matrix Spike (BFH0261-MS1)

Source: 2208155-01

Prepared & Analyzed: 08/12/22

Benzene	0.0695	0.0020	mg/kg	0.0750	ND	92.7	70-130			
Toluene	0.0701	0.0050	"	0.0750	ND	93.4	70-130			
Ethylbenzene	0.0764	0.0050	"	0.0750	ND	102	70-130			
m,p-Xylene	0.153	0.010	"	0.150	ND	102	70-130			
o-Xylene	0.0736	0.0050	"	0.0750	ND	98.2	70-130			
1,2,4-Trimethylbenzene	0.0756	0.0050	"	0.0750	ND	101	70-130			
1,3,5-Trimethylbenzene	0.0770	0.0050	"	0.0750	ND	103	70-130			
Naphthalene	0.0887	0.0038	"	0.0750	ND	118	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0369		"	0.0400		92.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0380		"	0.0400		95.0	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0355		"	0.0400		88.7	50-150			

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFH0261 - EPA 5030 Soil MS

Matrix Spike Dup (BFH0261-MSD1)	Source: 2208155-01			Prepared & Analyzed: 08/12/22						
Benzene	0.0664	0.0020	mg/kg	0.0750	ND	88.5	70-130	4.59	30	
Toluene	0.0700	0.0050	"	0.0750	ND	93.3	70-130	0.129	30	
Ethylbenzene	0.0771	0.0050	"	0.0750	ND	103	70-130	0.899	30	
m,p-Xylene	0.152	0.010	"	0.150	ND	101	70-130	0.315	30	
o-Xylene	0.0736	0.0050	"	0.0750	ND	98.2	70-130	0.0407	30	
1,2,4-Trimethylbenzene	0.0743	0.0050	"	0.0750	ND	99.0	70-130	1.80	30	
1,3,5-Trimethylbenzene	0.0774	0.0050	"	0.0750	ND	103	70-130	0.505	30	
Naphthalene	0.0956	0.0038	"	0.0750	ND	127	70-130	7.46	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0334</i>		<i>"</i>	<i>0.0400</i>		<i>83.5</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0380</i>		<i>"</i>	<i>0.0400</i>		<i>95.1</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0343</i>		<i>"</i>	<i>0.0400</i>		<i>85.6</i>	<i>50-150</i>			

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFH0262 - EPA 3550A

Blank (BFH0262-BLK1)

Prepared & Analyzed: 08/12/22

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

LCS (BFH0262-BS1)

Prepared & Analyzed: 08/12/22

C10-C28 (DRO)	412	50	mg/kg	500	82.4	70-130				
---------------	-----	----	-------	-----	------	--------	--	--	--	--

Matrix Spike (BFH0262-MS1)

Source: 2208155-01

Prepared & Analyzed: 08/12/22

C10-C28 (DRO)	443	50	mg/kg	500	10.9	86.4	70-130			
---------------	-----	----	-------	-----	------	------	--------	--	--	--

Matrix Spike Dup (BFH0262-MSD1)

Source: 2208155-01

Prepared & Analyzed: 08/12/22

C10-C28 (DRO)	427	50	mg/kg	500	10.9	83.1	70-130	3.72	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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFH0234 - EPA 5030 Soil MS

Blank (BFH0234-BLK1)

Prepared & Analyzed: 08/11/22

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0362</i>		"	<i>0.0333</i>		<i>109</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0297</i>		"	<i>0.0333</i>		<i>89.2</i>		<i>40-150</i>		

LCS (BFH0234-BS1)

Prepared & Analyzed: 08/11/22

Acenaphthene	0.0348	0.00500	mg/kg	0.0333	104	31-137
Anthracene	0.0355	0.00500	"	0.0333	106	30-120
Benzo (a) anthracene	0.0286	0.00500	"	0.0333	85.7	30-120
Benzo (a) pyrene	0.0336	0.00500	"	0.0333	101	30-120
Benzo (b) fluoranthene	0.0348	0.00500	"	0.0333	104	30-120
Benzo (k) fluoranthene	0.0378	0.00500	"	0.0333	113	30-120
Chrysene	0.0301	0.00500	"	0.0333	90.4	30-120
Dibenz (a,h) anthracene	0.0368	0.00500	"	0.0333	110	30-120
Fluoranthene	0.0380	0.00500	"	0.0333	114	30-120
Fluorene	0.0334	0.00500	"	0.0333	100	30-120
Indeno (1,2,3-cd) pyrene	0.0338	0.00500	"	0.0333	101	30-120
Pyrene	0.0298	0.00500	"	0.0333	89.4	35-142
1-Methylnaphthalene	0.0304	0.00500	"	0.0333	91.3	35-142
2-Methylnaphthalene	0.0312	0.00500	"	0.0333	93.5	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0306</i>		"	<i>0.0333</i>	<i>91.8</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0387</i>		"	<i>0.0333</i>	<i>116</i>	<i>40-150</i>

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFH0234 - EPA 5030 Soil MS

Matrix Spike (BFH0234-MS1)	Source: 2208088-01			Prepared & Analyzed: 08/11/22						
Acenaphthene	0.0213	0.00500	mg/kg	0.0333	ND	64.0	31-137			
Anthracene	0.0253	0.00500	"	0.0333	ND	76.0	30-120			
Benzo (a) anthracene	0.0211	0.00500	"	0.0333	ND	63.4	30-120			
Benzo (a) pyrene	0.0243	0.00500	"	0.0333	ND	72.8	30-120			
Benzo (b) fluoranthene	0.0252	0.00500	"	0.0333	ND	75.6	30-120			
Benzo (k) fluoranthene	0.0277	0.00500	"	0.0333	ND	83.0	30-120			
Chrysene	0.0225	0.00500	"	0.0333	ND	67.4	30-120			
Dibenz (a,h) anthracene	0.0256	0.00500	"	0.0333	ND	76.7	30-120			
Fluoranthene	0.0275	0.00500	"	0.0333	ND	82.6	30-120			
Fluorene	0.0205	0.00500	"	0.0333	ND	61.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0227	0.00500	"	0.0333	ND	68.2	30-120			
Pyrene	0.0230	0.00500	"	0.0333	ND	68.9	35-142			
1-Methylnaphthalene	0.0205	0.00500	"	0.0333	ND	61.4	15-130			
2-Methylnaphthalene	0.0234	0.00500	"	0.0333	ND	70.3	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0212</i>		<i>"</i>	<i>0.0333</i>		<i>63.5</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0252</i>		<i>"</i>	<i>0.0333</i>		<i>75.7</i>	<i>40-150</i>			

Matrix Spike Dup (BFH0234-MSD1)	Source: 2208088-01			Prepared & Analyzed: 08/11/22						
Acenaphthene	0.0220	0.00500	mg/kg	0.0333	ND	66.0	31-137	3.12	30	
Anthracene	0.0269	0.00500	"	0.0333	ND	80.6	30-120	5.87	30	
Benzo (a) anthracene	0.0227	0.00500	"	0.0333	ND	68.2	30-120	7.30	30	
Benzo (a) pyrene	0.0250	0.00500	"	0.0333	ND	75.0	30-120	2.88	30	
Benzo (b) fluoranthene	0.0255	0.00500	"	0.0333	ND	76.4	30-120	1.09	30	
Benzo (k) fluoranthene	0.0270	0.00500	"	0.0333	ND	81.1	30-120	2.22	30	
Chrysene	0.0231	0.00500	"	0.0333	ND	69.3	30-120	2.86	30	
Dibenz (a,h) anthracene	0.0273	0.00500	"	0.0333	ND	81.9	30-120	6.63	30	
Fluoranthene	0.0294	0.00500	"	0.0333	ND	88.2	30-120	6.49	30	
Fluorene	0.0226	0.00500	"	0.0333	ND	67.8	30-120	9.59	30	
Indeno (1,2,3-cd) pyrene	0.0249	0.00500	"	0.0333	ND	74.8	30-120	9.20	30	
Pyrene	0.0234	0.00500	"	0.0333	ND	70.1	35-142	1.77	30	
1-Methylnaphthalene	0.0234	0.00500	"	0.0333	ND	70.3	15-130	13.6	50	
2-Methylnaphthalene	0.0231	0.00500	"	0.0333	ND	69.2	15-130	1.54	50	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0226</i>		<i>"</i>	<i>0.0333</i>		<i>67.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0292</i>		<i>"</i>	<i>0.0333</i>		<i>87.7</i>	<i>40-150</i>			

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

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

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

Batch BFH0269 - EPA 3050B

Blank (BFH0269-BLK1)

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

Boron ND 0.0100 mg/L

LCS (BFH0269-BS1)

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

Boron 4.79 0.0100 mg/L 5.00 95.8 80-120

Duplicate (BFH0269-DUP1)

Source: 2208143-03

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

Boron 0.0319 0.0100 mg/L 0.0358 11.6 20

Matrix Spike (BFH0269-MS1)

Source: 2208143-03

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

Boron 4.62 0.0100 mg/L 5.00 0.0358 91.7 75-125

Matrix Spike Dup (BFH0269-MSD1)

Source: 2208143-03

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

Boron 4.66 0.0100 mg/L 5.00 0.0358 92.6 75-125 0.908 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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFH0222 - EPA 3050B

Blank (BFH0222-BLK1)

Prepared & Analyzed: 08/11/22

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 (BFH0222-BS1)

Prepared & Analyzed: 08/11/22

Arsenic	40.4	0.200	mg/kg wet	40.0	101	80-120
Barium	46.0	0.400	"	40.0	115	80-120
Cadmium	2.26	0.200	"	2.00	113	80-120
Copper	45.4	0.400	"	40.0	114	80-120
Lead	21.1	0.200	"	20.0	106	80-120
Nickel	45.2	0.400	"	40.0	113	80-120
Selenium	4.51	0.260	"	4.00	113	80-120
Silver	2.18	0.0200	"	2.00	109	80-120
Zinc	40.7	0.400	"	40.0	102	80-120

Duplicate (BFH0222-DUP1)

Source: 2208126-01

Prepared & Analyzed: 08/11/22

Arsenic	1.18	0.219	mg/kg dry	1.03	13.4	20
Barium	59.1	0.439	"	52.9	11.0	20
Cadmium	0.0916	0.219	"	0.0806	12.9	20
Copper	5.39	0.439	"	4.94	8.75	20
Lead	4.70	0.219	"	4.28	9.27	20
Nickel	4.58	0.439	"	4.22	8.06	20
Selenium	0.694	0.285	"	0.621	11.1	20
Silver	0.0372	0.0219	"	0.0326	13.2	20
Zinc	21.3	0.439	"	19.4	9.01	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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFH0222 - EPA 3050B

Matrix Spike (BFH0222-MS1)

Source: 2208126-01

Prepared & Analyzed: 08/11/22

Arsenic	53.6	0.219	mg/kg dry	43.9	1.03	120	75-125			
Barium	102	0.439	"	43.9	52.9	113	75-125			
Cadmium	2.51	0.219	"	2.19	0.0806	111	75-125			
Copper	55.2	0.439	"	43.9	4.94	115	75-125			
Lead	25.8	0.219	"	21.9	4.28	98.3	75-125			
Nickel	54.4	0.439	"	43.9	4.22	114	75-125			
Selenium	5.14	0.285	"	4.39	0.621	103	75-125			
Silver	2.32	0.0219	"	2.19	0.0326	104	75-125			
Zinc	71.2	0.439	"	43.9	19.4	118	75-125			

Matrix Spike Dup (BFH0222-MSD1)

Source: 2208126-01

Prepared & Analyzed: 08/11/22

Arsenic	54.5	0.219	mg/kg dry	43.9	1.03	122	75-125	1.73	25
Barium	108	0.439	"	43.9	52.9	125	75-125	4.80	25
Cadmium	2.56	0.219	"	2.19	0.0806	113	75-125	2.03	25
Copper	55.9	0.439	"	43.9	4.94	116	75-125	1.32	25
Lead	26.2	0.219	"	21.9	4.28	100	75-125	1.53	25
Nickel	55.5	0.439	"	43.9	4.22	117	75-125	2.04	25
Selenium	5.13	0.285	"	4.39	0.621	103	75-125	0.316	25
Silver	2.37	0.0219	"	2.19	0.0326	107	75-125	2.38	25
Zinc	72.6	0.439	"	43.9	19.4	121	75-125	1.99	25

Batch BFH0248 - EPA 3050B

Blank (BFH0248-BLK1)

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

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

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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFH0248 - EPA 3050B

LCS (BFH0248-BS1)

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

Arsenic	40.0	0.200	mg/kg wet	40.0		100	80-120			
Barium	37.6	0.400	"	40.0		94.0	80-120			
Cadmium	1.84	0.200	"	2.00		92.0	80-120			
Selenium	3.63	0.260	"	4.00		90.7	80-120			

Duplicate (BFH0248-DUP1)

Source: 2208150-01

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

Arsenic	5.45	0.200	mg/kg dry		5.41			0.699	20	
Barium	300	0.400	"		299			0.623	20	
Cadmium	0.206	0.200	"		0.216			4.58	20	
Selenium	1.04	0.260	"		1.03			0.642	20	

Matrix Spike (BFH0248-MS1)

Source: 2208150-01

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

Arsenic	51.3	0.200	mg/kg dry	47.6	5.41	96.3	75-125			
Barium	363	0.400	"	47.6	299	135	75-125			QM-02
Cadmium	2.29	0.200	"	2.38	0.216	87.0	75-125			
Selenium	4.89	0.260	"	4.76	1.03	81.1	75-125			

Matrix Spike Dup (BFH0248-MSD1)

Source: 2208150-01

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

Arsenic	51.8	0.200	mg/kg dry	47.6	5.41	97.4	75-125	1.01	25	
Barium	358	0.400	"	47.6	299	124	75-125	1.38	25	
Cadmium	2.30	0.200	"	2.38	0.216	87.7	75-125	0.750	25	
Selenium	4.85	0.260	"	4.76	1.03	80.2	75-125	0.876	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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFH0241 - 3060A Mod

Blank (BFH0241-BLK1)

Prepared: 08/11/22 Analyzed: 08/12/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFH0241-BS1)

Prepared: 08/11/22 Analyzed: 08/12/22

Chromium, Hexavalent 23.7 0.30 mg/kg wet 25.0 94.8 80-120

Duplicate (BFH0241-DUP1)

Source: 2208144-16

Prepared: 08/11/22 Analyzed: 08/12/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFH0241-MS1)

Source: 2208144-16

Prepared: 08/11/22 Analyzed: 08/12/22

Chromium, Hexavalent 31.4 0.30 mg/kg dry 30.1 ND 104 75-125

Matrix Spike Dup (BFH0241-MSD1)

Source: 2208144-16

Prepared: 08/11/22 Analyzed: 08/12/22

Chromium, Hexavalent 29.7 0.30 mg/kg dry 30.1 ND 98.8 75-125 5.51 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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

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

Summit Scientific

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

Batch BFH0273 - General Preparation

Blank (BFH0273-BLK1)

Prepared: 08/12/22 Analyzed: 08/15/22

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

LCS (BFH0273-BS1)

Prepared: 08/12/22 Analyzed: 08/15/22

Calcium	5.56	0.0500	mg/L wet	5.00	111	70-130				
Magnesium	5.35	0.0500	"	5.00	107	70-130				
Sodium	5.02	0.0500	"	5.00	100	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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

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

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

Batch BFH0237 - General Preparation

Duplicate (BFH0237-DUP1)		Source: 2208144-01			Prepared & Analyzed: 08/11/22			
% Solids	89.9		%		90.0		0.197	20

Batch BFH0270 - General Preparation

Duplicate (BFH0270-DUP1)		Source: 2208100-01			Prepared & Analyzed: 08/12/22			
% Solids	93.5		%		92.9		0.626	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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

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

Summit Scientific

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

Batch BFH0286 - General Preparation

Blank (BFH0286-BLK1)

Prepared & Analyzed: 08/15/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFH0286-BS1)

Prepared & Analyzed: 08/15/22

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

Duplicate (BFH0286-DUP1)

Source: 2208143-03

Prepared & Analyzed: 08/15/22

Specific Conductance (EC) 0.737 0.0100 mmhos/cm 0.742 0.757 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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

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

Summit Scientific

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

Batch BFH0287 - General Preparation

LCS (BFH0287-BS1)

Prepared & Analyzed: 08/15/22

pH 9.00 pH Units 9.18 98.0 95-105

Duplicate (BFH0287-DUP1)

Source: 2208143-03

Prepared & Analyzed: 08/15/22

pH 7.81 pH Units 7.81 0.00 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 P-7 Facility

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/16/22 15:56

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