

<b>Tank Battery Closure Checklist</b> <b>COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form</b>
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Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number: Lilli Unit 10-12 FAC		Date: 3/23/2022						Remediation Project #: 20978
Associated Wells:		Age of Site:						Number of Photos Attached: 13
Location: (GPS coordinates of southeaster berm) 40.677669, -103.921960							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: Well Graded Sand - SW				Estimated Depth to Groundwater: >5'				
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  None Observed								
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	
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<i>Tank Contents</i>	Produced Water	Crude Oil							
<i>Size (barrels)</i>									
<i>Age</i>									
<i>Construction Material</i>	Steele	Steele							
<i>Tank type (AST/DDV, etc.)</i>	PBV	AST							
<i>Visual Integrity C-Tank</i>	Good	Good							
<i>Condition of tank foundation</i>	Good	Good							
<i>PID Readings</i>									
<i>Soil impacts present at valves or hatches?</i>	None observed	None observed							
<i>PID Readings</i>	0.0 - 0.0	0.0 - 3.7							
<i>Sample taken? Location/ Sample ID#</i>	yes, see below	yes, see below							
<i>Photo Number(s)</i>	1-4, 13	5-7							

Other observations regarding tanks:  
Samples taken on all 4 sidewalls and base of excavation (SS01-04@2.5', FS01@5') Sample taken at base of AST, AST01 - AST03@0.5'

## Separators

Separator size									
Vertical or Horizontal Age	Vertical								
Soil impacts <del>above 12.16 cm</del>	None observed								
PID Readings	15.3-45.8								
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	
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100	100

[illegible]

Third Party																	
Removal Date																	
Sample taken?																	
PID Readings																	
Photo Number(s)																	
<b>Other Facility Equipment</b>																	
Equipment type	Meter House																
Equipment Condition	Good																
Age																	
Soil impacts observed during	None observed																
PID Readings	0.0																
Sample taken?	Yes, see below																
Photo Number(s)	10																
Other observations regarding other facility or third party equipment:																	
Sample taken below meter house. (MH01@0.5')																	
<b>Summary</b>																	
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: 45.8					Total number of samples submitted to lab for analysis: 12												
If more than 10 cubic yards of impacted soil were observed:																	
Vertical extent:					Estimated spill volume:												
Lateral extent:					Volume of soil removed:												
Is additional investigation required?																	
Was groundwater encountered during the investigation?																	
No		Yes - not impacted or in contact with impacted soils			Yes - groundwater impacted and/or in contact with impacted soils												
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes No												
Date Groundwater was encountered:					Commencement date of removal:												
Sheen on groundwater?		Yes No			Volume of groundwater removed prior to sampling:												
Free product observed?		Yes No			Volume of groundwater removed post sampling:												
Total number of samples collected:					Total Volume of groundwater removed:												
Total number of samples submitted to lab for analysis:																	





## Photographic Log

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





## Photographic Log

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





## Photographic Log

					
<b>Equipment ID:</b> AST01 @0.5'		<b>Equipment Type:</b> Above Ground Storage Tank			
<b>Material:</b> Steel	<b>Volume:</b>	<b>Contents:</b> Crude Oil			
<b>Notes/Conditions:</b>			<b>Notes/Conditions:</b>		




## Photographic Log

											
<b>Equipment ID:</b> AST03@0.5'		<b>Equipment Type:</b> Above Ground Storage Tank		<b>Equipment ID:</b> SEP01-FL01@3		<b>Equipment Type:</b> Separator					
<b>Material:</b> Steel		<b>Volume:</b>		<b>Contents:</b> Crude Oil		<b>Material:</b> Steel		<b>Volume:</b>		<b>Contents:</b> Oil/Gas/Water	
<b>Notes/Conditions:</b>						<b>Notes/Conditions:</b>					



## Photographic Log

						
<b>Equipment ID:</b> SEP01-DL01 @		<b>Equipment Type:</b> Separator				
<b>Material:</b> Steel	<b>Volume:</b>	<b>Contents:</b> Oil/Gas/Water		<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>
<b>Notes/Conditions:</b>			<b>Notes/Conditions:</b>			



## Photographic Log

					
<b>Equipment ID:</b> BG01@3'		<b>Equipment Type:</b>			
<b>Material:</b>	<b>Volume:</b>	<b>Contents:</b>		<b>Material:</b>	<b>Volume:</b>
<b>Notes/Conditions:</b>			<b>Notes/Conditions:</b>		



## Photographic Log

										
						Equipment ID: FS01 @5'		Equipment Type: Partially Buried Vault		
						Material: Concrete	Volume:	Contents: Produced Water		
						Notes/Conditions:				



**TABLE 1**  
**SOIL SAMPLE LOCATIONS**  
**NOBLE ENERGY, INC. - LILLI UNIT 10-12**

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude <sup>1</sup>	Longitude	PDOP
SS01@2.5'	03/31/22	0.0	No Staining	No Odor	Lab	40.67760483	-103.9223004	1.1
SS02@2.5'	03/31/22	0.0	No Staining	No Odor	Grab	40.67758400	-103.9222673	1.3
SS03@2.5'	03/31/22	0.0	No Staining	No Odor	Grab	40.67757065	-103.9222910	1.2
SS04@2.5'	03/31/22	0.0	No Staining	No Odor	Grab	40.67758178	-103.9223179	1.2
FS01@5'	03/31/22	1.5	No Staining	No Odor	Lab	40.67758659	-103.9223041	1.3
AST01@0.5'	03/31/22	0.0	No Staining	No Odor	Lab	40.67762927	-103.9222981	1.0
AST02@0.5'	03/31/22	0.0	No Staining	No Odor	Lab	40.67767200	-103.9222944	1.1
AST03@0.5'	03/31/22	3.7	No Staining	No Odor	Lab	40.67767092	-103.9223575	1.0
SEP01-DL01@3'	03/31/22	15.3	No Staining	No Odor	Lab	40.67768667	-103.9219928	1.0
SEP01-FL01@3'	03/31/22	45.8	No Staining	Slight HC Odor	Lab	40.67767096	-103.9219619	1.0
MH01@0.5'	03/31/22	0.0	No Staining	No Odor	Grab	40.67770216	-103.9219186	1.1
BG01@3'	03/31/22	0.0	No Staining	No Odor	Lab	40.67736699	-103.9223255	1.0
BG01@5'	03/31/22	0.0	No Staining	No Odor	Grab	40.67736699	-103.9223255	1.0

Notes:

PID = Photo-ionization detector

ppm = parts per million

PDOP = Position dilution of precision

HC = Hydrocarbon

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



TABLE 2  
SOIL ANALYTICAL DATA  
NOBLE ENERGY, INC. - LILLI UNIT 10-12

Soil Sample ID	Date	<sup>1</sup> Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	1,2,4 - TMB (mg/kg)	1,3,5 - TMB (mg/kg)	Naphthalene (mg/kg)	TPH-GRO (mg/kg)	TPH-DRO (mg/kg)	TPH-ORO (mg/kg)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benz(a) (mg/kg)	Benzo(a) (mg/kg)	Benzo(b) (mg/kg)	Benzo(k) (mg/kg)	Chrysene (mg/kg)	A,H (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	1,2,3-CD (mg/kg)	Pyrene (mg/kg)	1-M (mg/kg)	2-M (mg/kg)
Residential SSL <sup>2</sup>		1.2	490	5.8	58	30	27	2	500			360	1,800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
Protection of Groundwater SSL <sup>2,3</sup>		0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500			0.55	6	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
SS01@2.5'	03/31/22	<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@5'	03/31/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	94	<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'	03/31/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	350	81	<0.0500	<0.0500	<0.0500 <sup>4</sup>	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500 <sup>4</sup>	<0.0500 <sup>4</sup>	<0.0500 <sup>4</sup>
AST02@0.5'	03/31/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	1200	330	<0.0500	<0.0500	<0.0500 <sup>4</sup>	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500 <sup>4</sup>	<0.0500 <sup>4</sup>	<0.0500 <sup>4</sup>
AST03@0.5'	03/31/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	2700	710	<0.0500	<0.0500	0.625	0.584	0.159	<0.0500	0.768	0.104	<0.0500	<0.0500	0.0858	0.188	<0.0500 <sup>4</sup>	<0.0500 <sup>4</sup>
SEP01-DL01@3'	03/31/22	<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	0.00654	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SEP01-FL01@3'	03/31/22	<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 <sup>2</sup>		6 - 8.3	<6	<4mmhos/cm	2
SS01@2.5'	03/31/22	7.43	0.786	0.278	0.0176
FS01@5'	03/31/22	7.66	0.219	0.959	0.0573
AST01@0.5'	03/31/22	7.54	0.400	0.776	0.0395
AST02@0.5'	03/31/22	7.47	0.193	0.164	0.0275
AST03@0.5'	03/31/22	7.98	0.365	0.956	0.0335
SEP01-DL01@3'	03/31/22	7.97	1.800	1.090	0.1970
SEP01-FL01@3'	03/31/22	7.91	0.292	0.293	0.0273

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 SSL2		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST03@0.5'	3/31/2022	3.03	159	<0.224	<0.30	4.49	7.89	3.70	0.761	0.0508	16.7
BG01@3'	3/31/2022	3.30	163	<0.216	<0.30	4.89	8.15	4.17	0.840	0.0404	15.6

2. Soil Screening Levels (SSL) referenced from EPA Regional Screening Levels (EPA RSLs) for Chemical Contaminants at Superfund Sites, effective November 2020.

3. SSLs are applicable if a pathway for communication with groundwater is present.

4. Due to lab dilution requirements, detection limit above COGCC Protection of Groundwater SSL's

Definitions:

COGCC = Colorado Oil and Gas Conservation Commission

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

TPH-DRO = Total petroleum hydrocarbons - diesel range organics

TPH-ORO = Total petroleum hydrocarbons - oil range organics

mg/kg = Milligrams per kilogram

SAR = Sodium Adsorption Ratio

EC = Electrical Conductivity

mmhos/cm = Millmhos per centimeter

mg/L = Milligrams per liter

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

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

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

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

Benzo(a) = Benzanthracene

Benzo(b) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

Benzo(a) = Benzopyrene

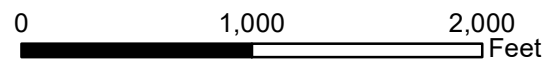
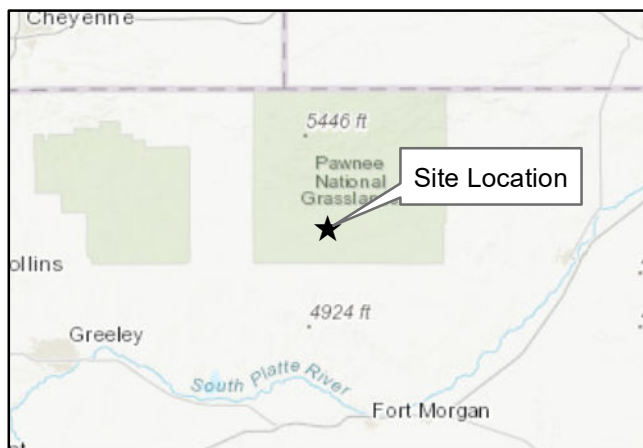
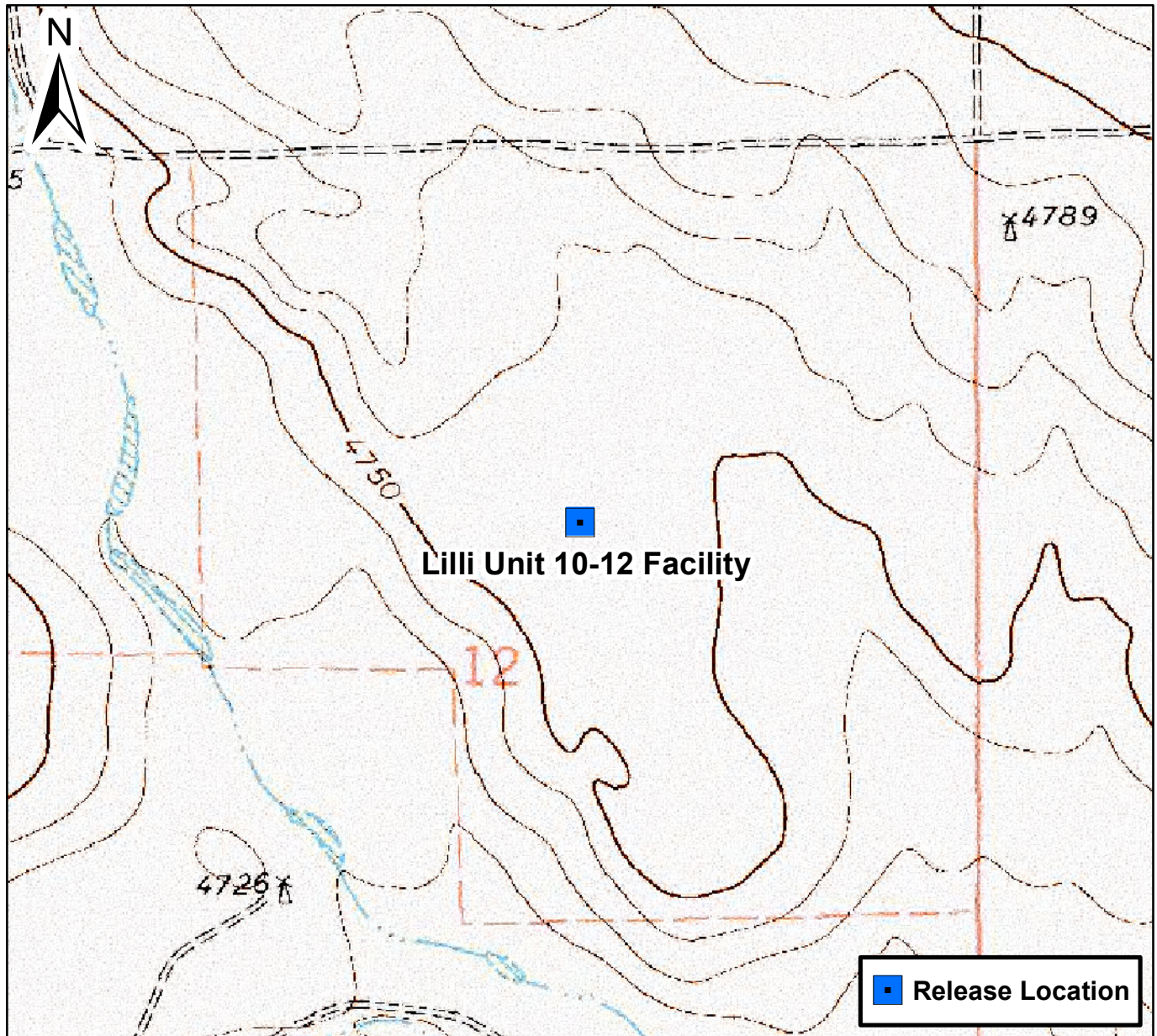
A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene






## Figure 1

Site Location Map  
Lilli Unit 10-12 Facility  
NWSE S12 T8N R59W  
Weld County, Colorado







DATE:	4/18/2022	 <b>TASMAN</b> Tasman, Inc. 6855 W 119 <sup>th</sup> Avenue Broomfield, CO 80020	<b>Noble Energy, Inc. – DJ Basin</b> <b>Lilli Unit 10-12 Facility</b> SWNE, Section 12, Township 8 North, Range 59 West Weld County, Colorado	Wellhead Closure & Soil Analytical Results Map (3/31/2022)	FIGURE 2
DESIGNED BY:	JW				
DRAWN BY:	JC				



# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 02, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Lilli Unit 10-12 (Fac)

Work Order #2204029

Enclosed are the results of analyses for samples received by Summit Scientific on 04/01/22 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', with a stylized, cursive script.

Paul Shrewsbury

President





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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@2.5'	2204029-01	Soil	03/31/22 10:00	04/01/22 09:30
FS01@5'	2204029-05	Soil	03/31/22 10:08	04/01/22 09:30
AST01@0.5'	2204029-06	Soil	03/31/22 10:10	04/01/22 09:30
AST02@0.5'	2204029-07	Soil	03/31/22 10:12	04/01/22 09:30
AST03@0.5'	2204029-08	Soil	03/31/22 10:14	04/01/22 09:30
SEP01-DL01@3'	2204029-09	Soil	03/31/22 14:35	04/01/22 09:30
SEP01-FL01@3'	2204029-10	Soil	03/31/22 14:38	04/01/22 09:30
BG01@3'	2204029-11	Soil	03/31/22 14:40	04/01/22 09:30

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

S<sub>2</sub>

2204029.1

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

Page 1 of 2

Client: Noble / Tasman

Project Manager: Jake Whritenour, Invoice Wade Firestien

Address: 6855 W. 119th Ave

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield/ CO/ 80020

Phone: 303261-6246

Project Name: Lilli Unit 10-12 (FAC)

Sampler Name: Stanley Gilbert

Project Number: UWBWE - A1788 - ABN

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO <sub>3</sub>	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD		
1	SS01 @ 2.5'	3/31/22	10:00	2			X			X				X	X	X	X	X		3AR, EC, PH By saturated paste
2	SS02 @ 2.5'		10:02				X			X				X	X	X	X	X		HOLD
3	SS03 @ 2.5'		10:04				X			X				X	X	X	X	X		HOLD
4	SS04 @ 2.5'		10:06				X			X				X	X	X	X	X		HOLD
5	FS01 @ 5'		10:08				X			X				X	X	X	X	X		
6	AST01 @ 0.5'		10:10				X			X				X	X	X	X	X		
7	AST02 @ 0.5'		10:12				X			X				X	X	X	X	X		
8	AST03 @ 0.5'		10:14				X			X				X	X	X	X	X		
9	SEP01-DL01 @ 3'		14:35				X			X				X	X	X	X	X		
10	SEP01-FL01 @ 3'		14:38				X			X				X	X	X	X	X		

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time (Check)	Notes:
	3/31/22 14:25	Tasman's Lock Box	3/31/22 14:25	Same Day _____ 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours _____ Standard <input checked="" type="checkbox"/>	
Tasman's Lock Box	4/1/22 09:30		4/1/22 09:30	48 hours _____	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	
				Temperature Upon Receipt: <u>4.1</u>	
				Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	



# Summit Scientific

S<sub>2</sub>

2204029.2

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

Page 2 of 2

Client: Noble / Tasman

Project Manager: Jake Whritenour, Invoice Wade Firestien

Address: 6855 W. 119th Ave

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield/ CO/ 80020

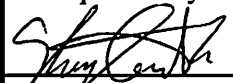

Phone: 303261-6246

Project Name: Lilli Unit 10-12 (FAC)

Sampler Name: Stanley Gilbert

Project Number: UWBWE-A1788-ABN

					Preservative				Matrix				Analysis Requested							Special Instructions
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD		
1	B60163'	3/31/22	14:40	1			X			X							X	X	X	SAR, EC, PH By Saturated paste
2	B60165'	3/31/22	14:42	1			X			X							X	X	X	HOLD
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
	3/31/22 14:25	Tasman's Lock Box	3/31/22 14:25	Same Day	72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
Tasman's Lock Box	4:22 0430		4:22 0430	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt:	
				Samples Intact: Yes No	4.1	



S<sub>2</sub>

## Sample Receipt Checklist

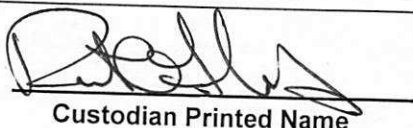
S2 Work Order# 2204029Client: Noble/Tosman Client Project ID: Lilli unit 10-12 (FAC)

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

	-			
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 4.1 Thermometer # 

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6 °C <sup>(1)</sup> ? <b>NOTE:</b> 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 <sup>(1)</sup> ?	-			
Was adequate sample volume provided <sup>(1)</sup> ?	-			
If custody seals are present, are they intact <sup>(1)</sup> ?	-			
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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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 <sup>(1)</sup> ?	-			
Does the COC agree with the number and type of sample bottles received <sup>(1)</sup> ?	-			
Do the sample IDs on the bottle labels match the COC <sup>(1)</sup> ?	-			
Is the COC properly relinquished by the client w/ date and time recorded <sup>(1)</sup> ?	-			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			-	
Are samples preserved that require preservation (excluding cooling) <sup>(1)</sup> ? Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.			-	
If samples are acid preserved for metals, is the pH ≤ 2 <sup>(1)</sup> ? Record the pH in Comments.			-	
If dissolved metals are requested, were samples field filtered?			-	
Additional Comments (if any):				

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


Custodian Printed Name

 RAH  
 3-4-1-22  
 Date/Time





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

Project: Noble - Lilli Unit 10-12 (Fac)

Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SS01@2.5'**  
**2204029-01 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFD0043	04/04/22	04/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		140 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		103 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0044	04/04/22	04/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		86.7 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SS01@2.5'**  
**2204029-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0046	04/04/22	04/05/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		53.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		45.9 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0176</b>	0.0100	mg/L	1	BFD0140	04/07/22	04/14/22	EPA 6020B	

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

Date Sampled: **03/31/22 10:00**

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

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SS01@2.5'**  
**2204029-01 (Soil)**

### Summit Scientific

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

Calcium	21.2	0.0546	mg/L dry	1	BFD0233	04/12/22	04/16/22	EPA 6020B
Magnesium	5.04	0.0546	"	"	"	"	"	"
Sodium	15.5	0.0546	"	"	"	"	"	"

#### Calculated Analysis

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.786	0.00100	units	1	BFD0332	04/17/22	04/17/22	Calculation	

#### Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.6		%	1	BFD0201	04/11/22	04/11/22	Calculation	

#### Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.278	0.0100	mmhos/cm	1	BFD0251	04/13/22	04/13/22	EPA 120.1	

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

Date Sampled: **03/31/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.43		pH Units	1	BFD0252	04/13/22	04/13/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**FS01@5'**  
**2204029-05 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0043	04/04/22	04/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		144 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	94	50	mg/kg	1	BFD0044	04/04/22	04/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		88.2 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**FS01@5'**  
**2204029-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0046	04/04/22	04/05/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		45.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		40.8 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0573</b>	0.0100	mg/L	1	BFD0140	04/07/22	04/14/22	EPA 6020B	

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

Date Sampled: **03/31/22 10:08**

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

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**FS01@5'**  
**2204029-05 (Soil)**

**Summit Scientific**

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

Calcium	84.8	0.0567	mg/L dry	1	BFD0233	04/12/22	04/16/22	EPA 6020B
Magnesium	13.3	0.0567	"	"	"	"	"	"
Sodium	8.22	0.0567	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.219	0.00100	units	1	BFD0332	04/17/22	04/17/22	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.2		%	1	BFD0201	04/11/22	04/11/22	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.959	0.0100	mmhos/cm	1	BFD0251	04/13/22	04/13/22	EPA 120.1	

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

Date Sampled: **03/31/22 10:08**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.66		pH Units	1	BFD0252	04/13/22	04/13/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST01@0.5'**  
**2204029-06 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BFD0043	04/04/22	04/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		143 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	350	50	mg/kg	1	BFD0044	04/04/22	04/05/22	EPA 8015M	
C28-C36 (ORO)	81	50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.5 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

**R-01**

Summit Scientific

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST01@0.5'**  
**2204029-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

**R-01**

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.0500	mg/kg	10	BFD0046	04/04/22	04/05/22	EPA 8270D SIM	
Anthracene	ND	0.0500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.0500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0500	"	"	"	"	"	"	
Chrysene	ND	0.0500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0500	"	"	"	"	"	"	
Fluoranthene	ND	0.0500	"	"	"	"	"	"	
Fluorene	ND	0.0500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0500	"	"	"	"	"	"	
Pyrene	ND	0.0500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.0500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.0500	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		56.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		40.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0395</b>	0.0100	mg/L	1	BFD0140	04/07/22	04/14/22	EPA 6020B	

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

Date Sampled: **03/31/22 10:10**

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

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST01@0.5'**  
**2204029-06 (Soil)**

**Summit Scientific**

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

Calcium	65.6	0.0544	mg/L dry	1	BFD0233	04/12/22	04/16/22	EPA 6020B
Magnesium	14.9	0.0544	"	"	"	"	"	"
Sodium	13.7	0.0544	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.400	0.00100	units	1	BFD0332	04/17/22	04/17/22	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.8		%	1	BFD0201	04/11/22	04/11/22	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.776	0.0100	mmhos/cm	1	BFD0251	04/13/22	04/13/22	EPA 120.1	

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

Date Sampled: **03/31/22 10:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.54		pH Units	1	BFD0252	04/13/22	04/13/22	EPA 9045D	

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST02@0.5'**  
**2204029-07 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0043	04/04/22	04/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		145 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	1200	50	mg/kg	1	BFD0044	04/04/22	04/05/22	EPA 8015M	
C28-C36 (ORO)	330	50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:12**

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

**PAH by EPA Method 8270D SIM**

**R-01**

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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST02@0.5'**  
**2204029-07 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

**R-01**

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.0500	mg/kg	10	BFD0046	04/04/22	04/05/22	EPA 8270D SIM	
Anthracene	ND	0.0500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.0500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.0500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.0500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0500	"	"	"	"	"	"	
Chrysene	ND	0.0500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.0500	"	"	"	"	"	"	
Fluoranthene	ND	0.0500	"	"	"	"	"	"	
Fluorene	ND	0.0500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.0500	"	"	"	"	"	"	
Pyrene	ND	0.0500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.0500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.0500	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		84.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		59.6 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0275</b>	0.0100	mg/L	1	BFD0140	04/07/22	04/14/22	EPA 6020B	

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

Date Sampled: **03/31/22 10:12**

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST02@0.5'**  
**2204029-07 (Soil)**

**Summit Scientific**

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

Calcium	19.4	0.0569	mg/L dry	1	BFD0233	04/12/22	04/16/22	EPA 6020B
Magnesium	5.15	0.0569	"	"	"	"	"	"
Sodium	3.70	0.0569	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.193	0.00100	units	1	BFD0332	04/17/22	04/17/22	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.9		%	1	BFD0201	04/11/22	04/11/22	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.164	0.0100	mmhos/cm	1	BFD0251	04/13/22	04/13/22	EPA 120.1	

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

Date Sampled: **03/31/22 10:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.47		pH Units	1	BFD0252	04/13/22	04/13/22	EPA 9045D	

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Broomfield CO, 80020

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST03@0.5'**  
**2204029-08 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0043	04/04/22	04/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		135 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	2700	50	mg/kg	1	BFD0044	04/04/22	04/05/22	EPA 8015M	
C28-C36 (ORO)	710	50	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:14**

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

**PAH by EPA Method 8270D SIM**

**R-01**

Summit Scientific

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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST03@0.5'**  
**2204029-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

**R-01**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.0500	mg/kg	10	BFD0046	04/04/22	04/05/22	EPA 8270D SIM	
Anthracene	ND	0.0500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.625</b>	0.0500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.584</b>	0.0500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.159</b>	0.0500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.0500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.768</b>	0.0500	"	"	"	"	"	"	
<b>Dibenz (a,h) anthracene</b>	<b>0.104</b>	0.0500	"	"	"	"	"	"	
Fluoranthene	ND	0.0500	"	"	"	"	"	"	
Fluorene	ND	0.0500	"	"	"	"	"	"	
<b>Indeno (1,2,3-cd) pyrene</b>	<b>0.0858</b>	0.0500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.188</b>	0.0500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.0500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.0500	"	"	"	"	"	"	

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	128 %	40-150			"	"	"	"	S-02
Surrogate: Fluoranthene-d10	72.8 %	40-150			"	"	"	"	S-02

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0335</b>	0.0100	mg/L	1	BFD0140	04/07/22	04/14/22	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **03/31/22 10:14**

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST03@0.5'**  
**2204029-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	3.03	0.224	mg/kg dry	1	BFD0538	04/25/22	04/30/22	EPA 6020B
Barium	159	0.448	"	"	"	"	"	"
Cadmium	ND	0.224	"	"	"	"	"	"
Copper	4.49	0.448	"	"	"	"	"	"
Lead	7.89	0.224	"	"	"	"	"	"
Nickel	3.70	0.448	"	"	"	"	"	"
Selenium	0.761	0.291	"	"	"	"	"	"
Silver	0.0508	0.0224	"	"	"	"	"	"
Zinc	16.7	0.448	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFD0388	04/19/22	04/19/22	EPA 7196A	

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

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	131	0.0560	mg/L dry	1	BFD0233	04/12/22	04/16/22	EPA 6020B	
Magnesium	22.5	0.0560	"	"	"	"	"	"	
Sodium	17.2	0.0560	"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.365	0.00100	units	1	BFD0332	04/17/22	04/17/22	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**AST03@0.5'**  
**2204029-08 (Soil)**

**Summit Scientific**

**Physical Parameters by APHA/ASTM/EPA Methods**

% Solids	89.2	%	1	BFD0201	04/11/22	04/11/22	Calculation
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**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.956	0.0100	mmhos/cm	1	BFD0251	04/13/22	04/13/22	EPA 120.1	

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

Date Sampled: **03/31/22 10:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.98		pH Units	1	BFD0252	04/13/22	04/13/22	EPA 9045D	

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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SEP01-DL01@3'**  
**2204029-09 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0043	04/04/22	04/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		146 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0044	04/04/22	04/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		104 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Lilli Unit 10-12 (Fac)  
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Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SEP01-DL01@3'**  
**2204029-09 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0046	04/04/22	04/05/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.00654</b>	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: **03/31/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		71.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		56.3 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.197</b>	0.0100	mg/L	1	BFD0140	04/07/22	04/14/22	EPA 6020B	

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

Date Sampled: **03/31/22 14:35**

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

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SEP01-DL01@3'**  
**2204029-09 (Soil)**

### Summit Scientific

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

Calcium	68.2	0.0570	mg/L dry	1	BFD0233	04/12/22	04/17/22	EPA 6020B
Magnesium	12.0	0.0570	"	"	"	"	"	"
Sodium	61.4	0.0570	"	"	"	"	"	"

#### Calculated Analysis

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.80	0.00100	units	1	BFD0332	04/17/22	04/17/22	Calculation	

#### Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.8		%	1	BFD0201	04/11/22	04/11/22	Calculation	

#### Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.09	0.0100	mmhos/cm	1	BFD0251	04/13/22	04/13/22	EPA 120.1	

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

Date Sampled: **03/31/22 14:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.97		pH Units	1	BFD0252	04/13/22	04/13/22	EPA 9045D	

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SEP01-FL01@3'**  
**2204029-10 (Soil)**

**Summit Scientific**

**Volatile Organic Compounds by EPA Method 8260B**

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFD0043	04/04/22	04/05/22	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4		138 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFD0044	04/04/22	04/05/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl		98.5 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SEP01-FL01@3'**  
**2204029-10 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFD0046	04/04/22	04/05/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		86.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		90.0 %	40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0273</b>	0.0100	mg/L	1	BFD0140	04/07/22	04/14/22	EPA 6020B	

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

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**SEP01-FL01@3'**  
**2204029-10 (Soil)**

### Summit Scientific

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

Calcium	29.9	0.0564	mg/L dry	1	BFD0233	04/12/22	04/17/22	EPA 6020B
Magnesium	5.07	0.0564	"	"	"	"	"	"
Sodium	6.57	0.0564	"	"	"	"	"	"

#### Calculated Analysis

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.292	0.00100	units	1	BFD0332	04/17/22	04/17/22	Calculation	

#### Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.6		%	1	BFD0201	04/11/22	04/11/22	Calculation	

#### Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.293	0.0100	mmhos/cm	1	BFD0251	04/13/22	04/13/22	EPA 120.1	

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

Date Sampled: **03/31/22 14:38**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.91		pH Units	1	BFD0252	04/13/22	04/13/22	EPA 9045D	

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Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**BG01@3'**  
**2204029-11 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Date Sampled: **03/31/22 14:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	<b>3.30</b>	0.216	mg/kg dry	1	BFD0538	04/25/22	04/30/22	EPA 6020B	
Barium	<b>163</b>	0.432	"	"	"	"	"	"	
Cadmium	ND	0.216	"	"	"	"	"	"	
Copper	<b>4.89</b>	0.432	"	"	"	"	"	"	
Lead	<b>8.15</b>	0.216	"	"	"	"	"	"	
Nickel	<b>4.17</b>	0.432	"	"	"	"	"	"	
Selenium	<b>0.840</b>	0.281	"	"	"	"	"	"	
Silver	<b>0.0404</b>	0.0216	"	"	"	"	"	"	
Zinc	<b>15.6</b>	0.432	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **03/31/22 14:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFD0388	04/19/22	04/19/22	EPA 7196A	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **03/31/22 14:40**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	<b>92.5</b>		%	1	BFD0421	04/20/22	04/20/22	Calculation	

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Project: Noble - Lilli Unit 10-12 (Fac)  
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Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

## Volatile Organic Compounds by EPA Method 8260B - Quality Control

### Summit Scientific

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

#### Batch BFD0043 - EPA 5030 Soil MS

##### Blank (BFD0043-BLK1)

Prepared & Analyzed: 04/04/22

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0556		"	0.0400		139	50-150			
Surrogate: Toluene-d8	0.0404		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	50-150			

##### LCS (BFD0043-BS1)

Prepared & Analyzed: 04/04/22

Benzene	0.0836	0.0020	mg/kg	0.100		83.6	70-130			
Toluene	0.0996	0.0050	"	0.100		99.6	70-130			
Ethylbenzene	0.0940	0.0050	"	0.100		94.0	70-130			
m,p-Xylene	0.196	0.010	"	0.200		97.8	70-130			
o-Xylene	0.0980	0.0050	"	0.100		98.0	70-130			
1,2,4-Trimethylbenzene	0.107	0.0050	"	0.100		107	70-130			
1,3,5-Trimethylbenzene	0.103	0.0050	"	0.100		103	70-130			
Naphthalene	0.107	0.0038	"	0.100		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0500		"	0.0400		125	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0424		"	0.0400		106	50-150			

##### Matrix Spike (BFD0043-MS1)

Source: 2204022-01

Prepared & Analyzed: 04/04/22

Benzene	0.0919	0.0020	mg/kg	0.100	ND	91.9	70-130			
Toluene	0.104	0.0050	"	0.100	ND	104	70-130			
Ethylbenzene	0.0968	0.0050	"	0.100	ND	96.8	70-130			
m,p-Xylene	0.200	0.010	"	0.200	ND	100	70-130			
o-Xylene	0.102	0.0050	"	0.100	ND	102	70-130			
1,2,4-Trimethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130			
1,3,5-Trimethylbenzene	0.106	0.0050	"	0.100	ND	106	70-130			
Naphthalene	0.129	0.0038	"	0.100	ND	129	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0509		"	0.0400		127	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0432		"	0.0400		108	50-150			

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Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

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

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

**Batch BFD0043 - EPA 5030 Soil MS**

Matrix Spike Dup (BFD0043-MSD1)		Source: 2204022-01			Prepared & Analyzed: 04/04/22					
Benzene	0.0948	0.0020	mg/kg	0.100	ND	94.8	70-130	3.12	30	
Toluene	0.107	0.0050	"	0.100	ND	107	70-130	2.54	30	
Ethylbenzene	0.0975	0.0050	"	0.100	ND	97.5	70-130	0.710	30	
m,p-Xylene	0.205	0.010	"	0.200	ND	102	70-130	2.40	30	
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130	1.44	30	
1,2,4-Trimethylbenzene	0.109	0.0050	"	0.100	ND	109	70-130	0.985	30	
1,3,5-Trimethylbenzene	0.104	0.0050	"	0.100	ND	104	70-130	1.77	30	
Naphthalene	0.123	0.0038	"	0.100	ND	123	70-130	4.82	30	
<hr/>										
Surrogate: 1,2-Dichloroethane-d4	0.0514		"	0.0400		128	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0420		"	0.0400		105	50-150			

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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**Extractable Petroleum Hydrocarbons by 8015 - Quality Control**  
**Summit Scientific**

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

**Batch BFD0044 - EPA 3550A**

**Blank (BFD0044-BLK1)**

Prepared & Analyzed: 04/04/22

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

**LCS (BFD0044-BS1)**

Prepared & Analyzed: 04/04/22

C10-C28 (DRO)	477	50	mg/kg	500	95.3	70-130
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**Matrix Spike (BFD0044-MS1)**

Source: 2204022-01

Prepared & Analyzed: 04/04/22

C10-C28 (DRO)	451	50	mg/kg	500	28.3	84.5	70-130
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**Matrix Spike Dup (BFD0044-MSD1)**

Source: 2204022-01

Prepared & Analyzed: 04/04/22

C10-C28 (DRO)	453	50	mg/kg	500	28.3	84.9	70-130	0.384	20
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Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BFD0046 - EPA 5030 Soil MS

##### Blank (BFD0046-BLK1)

Prepared & Analyzed: 04/04/22

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0178		"	0.0333		53.5	40-150			
Surrogate: Fluoranthene-d10	0.0161		"	0.0333		48.3	40-150			

##### LCS (BFD0046-BS1)

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

Acenaphthene	0.0202	0.00500	mg/kg	0.0333		60.5	31-137			
Anthracene	0.0198	0.00500	"	0.0333		59.5	30-120			
Benzo (a) anthracene	0.0208	0.00500	"	0.0333		62.5	30-120			
Benzo (a) pyrene	0.0188	0.00500	"	0.0333		56.4	30-120			
Benzo (b) fluoranthene	0.0197	0.00500	"	0.0333		59.2	30-120			
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333		60.5	30-120			
Chrysene	0.0193	0.00500	"	0.0333		57.9	30-120			
Dibenz (a,h) anthracene	0.0202	0.00500	"	0.0333		60.6	30-120			
Fluoranthene	0.0204	0.00500	"	0.0333		61.2	30-120			
Fluorene	0.0177	0.00500	"	0.0333		53.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0295	0.00500	"	0.0333		88.4	30-120			
Pyrene	0.0212	0.00500	"	0.0333		63.6	35-142			
1-Methylnaphthalene	0.0211	0.00500	"	0.0333		63.2	35-142			
2-Methylnaphthalene	0.0188	0.00500	"	0.0333		56.4	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0194		"	0.0333		58.2	40-150			
Surrogate: Fluoranthene-d10	0.0201		"	0.0333		60.4	40-150			

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**Reported:**  
05/02/22 12:12

## PAH by EPA Method 8270D SIM - Quality Control

### Summit Scientific

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

#### Batch BFD0046 - EPA 5030 Soil MS

##### Matrix Spike (BFD0046-MS1)

Source: 2204021-01

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

Acenaphthene	0.0541	0.00500	mg/kg	0.0333	ND	162	31-137				S-02
Anthracene	0.0236	0.00500	"	0.0333	ND	70.7	30-120				
Benzo (a) anthracene	0.0235	0.00500	"	0.0333	ND	70.4	30-120				
Benzo (a) pyrene	0.0549	0.00500	"	0.0333	0.0645	NR	30-120				S-02
Benzo (b) fluoranthene	0.0352	0.00500	"	0.0333	ND	106	30-120				
Benzo (k) fluoranthene	0.0247	0.00500	"	0.0333	ND	74.1	30-120				
Chrysene	0.0518	0.00500	"	0.0333	0.0488	9.27	30-120				S-02
Dibenz (a,h) anthracene	0.0346	0.00500	"	0.0333	ND	104	30-120				
Fluoranthene	0.0166	0.00500	"	0.0333	ND	49.7	30-120				
Fluorene	0.0444	0.00500	"	0.0333	ND	133	30-120				S-02
Indeno (1,2,3-cd) pyrene	0.0394	0.00500	"	0.0333	ND	118	30-120				
Pyrene	0.0390	0.00500	"	0.0333	0.00703	95.9	35-142				
1-Methylnaphthalene	0.0265	0.00500	"	0.0333	ND	79.6	15-130				
2-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.6	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0222		"	0.0333		66.7	40-150				
Surrogate: Fluoranthene-d10	0.0174		"	0.0333		52.2	40-150				

##### Matrix Spike Dup (BFD0046-MSD1)

Source: 2204021-01

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

Acenaphthene	0.0174	0.00500	mg/kg	0.0333	ND	52.1	31-137	103	30		S-02
Anthracene	0.0246	0.00500	"	0.0333	ND	73.9	30-120	4.34	30		
Benzo (a) anthracene	0.0270	0.00500	"	0.0333	ND	81.1	30-120	14.1	30		
Benzo (a) pyrene	0.0735	0.00500	"	0.0333	0.0645	26.9	30-120	28.9	30		S-02
Benzo (b) fluoranthene	0.0339	0.00500	"	0.0333	ND	102	30-120	3.96	30		
Benzo (k) fluoranthene	0.0175	0.00500	"	0.0333	ND	52.5	30-120	34.1	30		S-02
Chrysene	0.0814	0.00500	"	0.0333	0.0488	98.0	30-120	44.4	30		S-02
Dibenz (a,h) anthracene	0.0331	0.00500	"	0.0333	ND	99.4	30-120	4.19	30		
Fluoranthene	0.0183	0.00500	"	0.0333	ND	54.8	30-120	9.86	30		
Fluorene	0.00687	0.00500	"	0.0333	ND	20.6	30-120	146	30		S-02
Indeno (1,2,3-cd) pyrene	0.0604	0.00500	"	0.0333	ND	181	30-120	42.2	30		S-02
Pyrene	0.0453	0.00500	"	0.0333	0.00703	115	35-142	15.1	30		
1-Methylnaphthalene	0.0252	0.00500	"	0.0333	ND	75.6	15-130	5.08	50		
2-Methylnaphthalene	0.0247	0.00500	"	0.0333	ND	74.1	15-130	10.7	50		
Surrogate: 2-Methylnaphthalene-d10	0.0243		"	0.0333		72.9	40-150				
Surrogate: Fluoranthene-d10	0.0171		"	0.0333		51.4	40-150				

Summit Scientific

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

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

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

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

**Batch BFD0140 - EPA 3050B**

**Blank (BFD0140-BLK1)**

Prepared: 04/07/22 Analyzed: 04/14/22

Boron ND 0.0100 mg/L

**LCS (BFD0140-BS1)**

Prepared: 04/07/22 Analyzed: 04/14/22

Boron 5.09 0.0100 mg/L 5.00 102 80-120

**Duplicate (BFD0140-DUP1)**

**Source: 2204024-01**

Prepared: 04/07/22 Analyzed: 04/14/22

Boron 0.106 0.0100 mg/L 0.115 7.93 20

**Matrix Spike (BFD0140-MS1)**

**Source: 2204024-01**

Prepared: 04/07/22 Analyzed: 04/14/22

Boron 5.50 0.0100 mg/L 5.00 0.115 108 75-125

**Matrix Spike Dup (BFD0140-MSD1)**

**Source: 2204024-01**

Prepared: 04/07/22 Analyzed: 04/14/22

Boron 5.38 0.0100 mg/L 5.00 0.115 105 75-125 2.23 25

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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BFD0538 - EPA 3050B**

**Blank (BFD0538-BLK1)**

Prepared: 04/25/22 Analyzed: 04/30/22

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 (BFD0538-BS1)**

Prepared: 04/25/22 Analyzed: 04/30/22

Arsenic	45.2	0.200	mg/kg wet	40.0	113	80-120
Barium	39.4	0.400	"	40.0	98.5	80-120
Cadmium	2.28	0.200	"	2.00	114	80-120
Copper	41.0	0.400	"	40.0	103	80-120
Lead	20.9	0.200	"	20.0	105	80-120
Nickel	40.3	0.400	"	40.0	101	80-120
Selenium	4.00	0.260	"	4.00	100	80-120
Silver	2.06	0.0200	"	2.00	103	80-120
Zinc	44.6	0.400	"	40.0	112	80-120

**Duplicate (BFD0538-DUP1)**

Source: 2204029-08

Prepared: 04/25/22 Analyzed: 04/30/22

Arsenic	3.08	0.224	mg/kg dry	3.03	1.84	20
Barium	155	0.448	"	159	2.02	20
Cadmium	0.160	0.224	"	0.168	4.88	20
Copper	4.36	0.448	"	4.49	2.90	20
Lead	7.68	0.224	"	7.89	2.69	20
Nickel	3.58	0.448	"	3.70	3.33	20
Selenium	0.763	0.291	"	0.761	0.200	20
Silver	0.0448	0.0224	"	0.0508	12.5	20
Zinc	16.6	0.448	"	16.7	0.551	20

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Tasman Geosciences  
6855 W. 119th Ave.  
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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BFD0538 - EPA 3050B**

Matrix Spike (BFD0538-MS1)		Source: 2204029-08			Prepared: 04/25/22 Analyzed: 04/30/22					
Arsenic	57.1	0.224	mg/kg dry	44.8	3.03	121	75-125			
Barium	238	0.448	"	44.8	159	176	75-125			QM-05
Cadmium	2.78	0.224	"	2.24	0.168	117	75-125			
Copper	47.0	0.448	"	44.8	4.49	94.9	75-125			
Lead	32.5	0.224	"	22.4	7.89	110	75-125			
Nickel	50.2	0.448	"	44.8	3.70	104	75-125			
Selenium	5.31	0.291	"	4.48	0.761	102	75-125			
Silver	2.38	0.0224	"	2.24	0.0508	104	75-125			
Zinc	70.9	0.448	"	44.8	16.7	121	75-125			

Matrix Spike Dup (BFD0538-MSD1)		Source: 2204029-08			Prepared: 04/25/22 Analyzed: 04/30/22					
Arsenic	61.4	0.224	mg/kg dry	44.8	3.03	130	75-125	7.35	25	QM-05
Barium	228	0.448	"	44.8	159	156	75-125	3.98	25	QM-05
Cadmium	2.72	0.224	"	2.24	0.168	114	75-125	2.24	25	
Copper	49.0	0.448	"	44.8	4.49	99.3	75-125	4.09	25	
Lead	31.5	0.224	"	22.4	7.89	105	75-125	3.34	25	
Nickel	51.5	0.448	"	44.8	3.70	107	75-125	2.65	25	
Selenium	5.32	0.291	"	4.48	0.761	102	75-125	0.112	25	
Silver	2.28	0.0224	"	2.24	0.0508	99.2	75-125	4.35	25	
Zinc	75.8	0.448	"	44.8	16.7	132	75-125	6.72	25	QM-05

Summit Scientific

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Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BFD0388 - 3060A Mod**

**Blank (BFD0388-BLK1)**

Prepared & Analyzed: 04/19/22

Chromium, Hexavalent ND 0.30 mg/kg wet

**LCS (BFD0388-BS1)**

Prepared & Analyzed: 04/19/22

Chromium, Hexavalent 25.6 0.30 mg/kg wet 25.0 102 80-120

**Duplicate (BFD0388-DUP1)**

Source: 2202321-08

Prepared & Analyzed: 04/19/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

**Matrix Spike (BFD0388-MS1)**

Source: 2202321-08

Prepared & Analyzed: 04/19/22

Chromium, Hexavalent 26.3 0.30 mg/kg dry 26.2 ND 100 75-125

**Matrix Spike Dup (BFD0388-MSD1)**

Source: 2202321-08

Prepared & Analyzed: 04/19/22

Chromium, Hexavalent 29.5 0.30 mg/kg dry 26.2 ND 113 75-125 11.6 20

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Broomfield CO, 80020

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

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

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

**Batch BFD0233 - General Preparation**

**Blank (BFD0233-BLK1)**

Prepared: 04/12/22 Analyzed: 04/16/22

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

**LCS (BFD0233-BS1)**

Prepared: 04/12/22 Analyzed: 04/16/22

Calcium	5.50	0.0500	mg/L wet	5.00	110	70-130
Magnesium	6.38	0.0500	"	5.00	128	70-130
Sodium	6.19	0.0500	"	5.00	124	70-130

Summit Scientific

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Project: Noble - Lilli Unit 10-12 (Fac)

Project Number: UWRWE-A1788-ABN

Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

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

**Summit Scientific**

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

**Batch BFD0201 - General Preparation**

**Duplicate (BFD0201-DUP1)**

**Source: 2204025-01**

Prepared & Analyzed: 04/11/22

% Solids	94.5	%		95.3		0.836	20
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**Batch BFD0421 - General Preparation**

**Duplicate (BFD0421-DUP1)**

**Source: 2202321-08**

Prepared & Analyzed: 04/20/22

% Solids	95.4	%		95.6		0.151	20
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Summit Scientific

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Broomfield CO, 80020

Project: Noble - Lilli Unit 10-12 (Fac)  
Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

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

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

**Batch BFD0251 - General Preparation**

**Blank (BFD0251-BLK1)**

Prepared & Analyzed: 04/13/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BFD0251-BS1)**

Prepared & Analyzed: 04/13/22

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 102 95-105

**Duplicate (BFD0251-DUP1)**

**Source: 2204029-01**

Prepared & Analyzed: 04/13/22

Specific Conductance (EC) 0.276 0.0100 mmhos/cm 0.278 0.506 20

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Broomfield CO, 80020

Project: Noble - Lilli Unit 10-12 (Fac)

Project Number: UWRWE-A1788-ABN

Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

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

**Summit Scientific**

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

**Batch BFD0252 - General Preparation**

**LCS (BFD0252-BS1)**

Prepared & Analyzed: 04/13/22

pH	9.07	pH Units	9.18	98.8	95-105
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**Duplicate (BFD0252-DUP1)**

Source: 2204029-01

Prepared & Analyzed: 04/13/22

pH	7.54	pH Units	7.43	1.47	20
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Summit Scientific

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6855 W. 119th Ave.  
Broomfield CO, 80020

Project: Noble - Lilli Unit 10-12 (Fac)

Project Number: UWRWE-A1788-ABN  
Project Manager: Jacob Whritenour

**Reported:**  
05/02/22 12:12

### Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
R-01	The Reporting Limit for this analyte has been raised to account for matrix interference.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference