



Third Party																	
Removal Date																	
Sample taken?																	
PID Readings																	
Photo Number(s)																	
Other Facility Equipment																	
Equipment type	Meter House																
Equipment Condition	Good																
Age																	
Soil impacts observed during	None observed																
PID Readings	0.0																
Sample taken?	Yes, see below																
Photo Number(s)	9																
Other observations regarding other facility or third party equipment:																	
Sample taken below Burner. (Flare01@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: 14					Total number of samples collected: 14												
Highest PID Reading: 25.7					Total number of samples submitted to lab for analysis: 10												
If more than 10 cubic yards of impacted soil were observed:																	
Vertical extent:					Estimated spill volume:												
Lateral extent:					Volume of soil removed:												
Is additional investigation required?																	
Was groundwater encountered during the investigation?																	
No		Yes - not impacted or in contact with impacted soils			Yes - groundwater impacted and/or in contact with impacted soils												
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes No												
Date Groundwater was encountered:					Commencement date of removal:												
Sheen on groundwater?		Yes		No	Volume of groundwater removed prior to sampling:												
Free product observed?		Yes		No	Volume of groundwater removed post sampling:												
Total number of samples collected:					Total Volume of groundwater removed:												
Total number of samples submitted to lab for analysis:																	

Photographic Log



Equipment ID:SEP01-FL@4'		Equipment Type:Flowline		Equipment ID:SEP01 @0.5'		Equipment Type:Separator	
Material:Steel		Volume:	Contents:Oil/Gas/Water	Material:Steel		Volume:	Contents:Oil/Gas/Water
Notes/Conditions:				Notes/Conditions:			

Photographic Log

													
Equipment ID:SS01 @3'			Equipment Type:			Equipment ID:SS02 @3'			Equipment Type:				
Material:			Volume:		Contents:		Material:			Volume:		Contents:	
Notes/Conditions:						Notes/Conditions:							

Photographic Log



Equipment ID:SS03@3'

Equipment Type:

Material:

Volume:

Contents:

Notes/Conditions:



Equipment ID:SS04@3'

Equipment Type:

Material:

Volume:



Contents:

Notes/Conditions:





Photographic Log

																	
Equipment ID: FS01 @ 4'			Equipment Type:			Equipment ID: AST01 @ 0.5'			Equipment Type: Above Ground Storage Tank								
Material:			Volume:			Contents:			Material: Steel			Volume:			Contents: Oil/Gas/Water		
Notes/Conditions:									Notes/Conditions:								

Photographic Log

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

Photographic Log

					
Equipment ID: Flare01 @0.5'		Equipment Type: Emission Control Device			
Material: Steel	Volume:	Contents: Oil/Gas/Water			
Notes/Conditions:					
					
Equipment ID: SEP01-DL		Equipment Type: Dump Line			
Material: Steel	Volume:	Contents: Oil/Gas/Water			
Notes/Conditions:					

Photographic Log



													
Equipment ID: BG01@2.5'			Equipment Type:			Equipment ID: BG02@5'			Equipment Type:				
Material:			Volume:		Contents:		Material:			Volume:		Contents:	
Notes/Conditions:						Notes/Conditions:							

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - LILLI UNIT C-9

Soil Sample ID	Date	PID (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude ¹	Longitude	PDOP
SEP01-FL@4'	05/18/22	4.0	No Staining	No Odor	Lab	40.68369282	-103.8694495	1.2
SEP01@0.5'	05/18/22	0.7	No Staining	No Odor	Lab	40.68367494	-103.8694550	1.2
SS01@3'	05/18/22	0.6	No Staining	No Odor	Lab	40.68372992	-103.8699428	1.1
SS02@3'	05/18/22	0.2	No Staining	No Odor	Grab	40.68370102	-103.8698860	1.1
SS03@3'	05/18/22	0.1	No Staining	No Odor	Grab	40.68368073	-103.8699364	1.3
SS04@3'	05/18/22	0.3	No Staining	No Odor	Grab	40.68371172	-103.8699550	1.3
FS01@4'	05/18/22	0.5	No Staining	No Odor	Lab	40.68369840	-103.8699401	1.3
AST01@0.5'	05/18/22	0.5	No Staining	No Odor	Lab	40.68373341	-103.8697700	1.3
AST02@0.5'	05/18/22	0.3	No Staining	No Odor	Lab	40.68372035	-103.8698528	1.1
AST03@0.5'	05/18/22	0.2	No Staining	No Odor	Lab	40.68370390	-103.8699005	1.1
Flare01@1'	05/18/22	0.4	No Staining	No Odor	Grab	40.68364393	-103.8695352	1.2
SEP01-DL@4'	05/18/22	25.7	No Staining	No Odor	Lab	40.68369781	-103.8694415	1.2
BG01@2.5'	05/18/22	0.0	No Staining	No Odor	Lab	40.68386300	-103.8698999	1.1
BG02@5'	05/18/22	0.6	No Staining	HC Odor	Lab	40.68385885	-103.8698825	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 C-9

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
SEP01-FL@4'	05/18/22	<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@0.5'	05/18/22	<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
SS01@3'	05/18/22	<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'	05/18/22	<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'	05/18/22	<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'	05/18/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	63	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0139	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
AST03@0.5'	05/18/22	<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@4'	05/18/22	0.014	0.049	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	0.0126	<0.00500	<0.00500	<0.00500	<0.00500	0.0231	<0.00500	<0.00500	0.0272	<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
SEP01-FL@4'	05/18/22	8.03	0.162	0.59	0.0675
SEP01@0.5'	05/18/22	8.14	0.159	0.387	0.111
SS01@3'	05/18/22	8.34	0.124	0.326	0.0893
FS01@4'	05/18/22	8.49	0.173	0.331	0.120
AST01@0.5'	05/18/22	8.10	0.0596	0.349	0.0432
AST02@0.5'	05/18/22	8.23	0.0431	0.252	0.0766
AST03@0.5'	05/18/22	8.68	0.0358	0.168	0.0241
SEP01-DL@4'	05/18/22	8.04	0.109	0.438	0.0625
BG01@2.5'	05/18/22	8.71	NA	NA	NA
BG02@5'	05/18/22	8.71	NA	NA	NA

Soil Sample ID	Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
Residential SSL ²		0.68	15,000	71	0.3	3,100	400	1,500	390	390	23,000
Protection of Groundwater		0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
SEP01-FL@4'	05/18/22	3.56	78.0	<0.262	<0.30	7.86	6.96	7.31	0.871	<0.0262	24.5
SEP01-DL@4'	05/18/22	4.57	61.6	0.435	<0.30	14.0	8.37	5.00	0.475	<0.0238	28.9
BG02@5'	05/18/22	13.6	36.6	<0.208	<0.30	2.45	3.56	3.09	0.634	<0.0208	7.31

Notes:

1. Compounds referenced from 2 CCR 404-1, Table 915-1, effective January 15, 2021.
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.

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
Benz(a) = Benzanthracene
Benzo(b) = Benzo(a)fluoranthene
Benzo(k) = Benzo(a)fluoranthene
Benzo(a) = Benzopyrene
A,H = Dibenzoanthracene
1,2,3-CD = Indenopyrene
1-M = 1-methylnaphthalene
2-M = 2-methylnaphthalene
NA = Not Analyzed

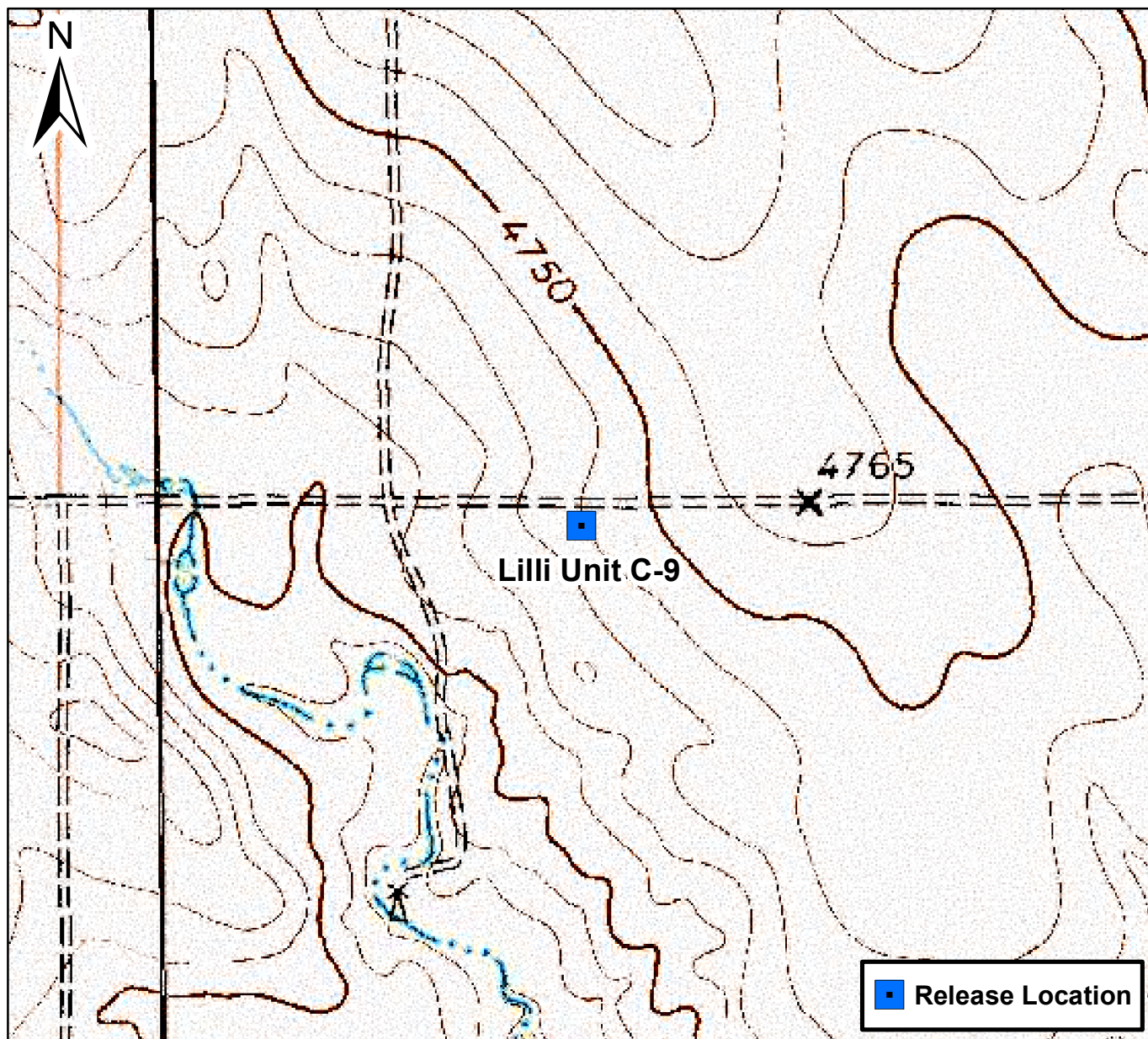


Figure 1

Site Location Map
Lilli Unit C-9
NENW S9 T8N R58W
Weld County, Colorado





Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

August 25, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Lilli Unit C-9

Work Order #2205302

Enclosed are the results of analyses for samples received by Summit Scientific on 05/18/22 18:00. 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 C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SEP01-FL@4'	2205302-01	Soil	05/18/22 13:35	05/18/22 18:00
SEP01@0.5'	2205302-02	Soil	05/18/22 13:40	05/18/22 18:00
SS01@3'	2205302-03	Soil	05/18/22 13:55	05/18/22 18:00
FS01@4'	2205302-07	Soil	05/18/22 14:12	05/18/22 18:00
AST01@0.5'	2205302-08	Soil	05/18/22 14:16	05/18/22 18:00
AST02@0.5'	2205302-09	Soil	05/18/22 14:18	05/18/22 18:00
AST03@0.5'	2205302-10	Soil	05/18/22 14:20	05/18/22 18:00
SEP01-DL@4'	2205302-11	Soil	05/18/22 00:00	05/18/22 18:00
BG01@2.5'	2205302-12	Soil	05/18/22 00:00	05/18/22 18:00
BG02@5'	2205302-13	Soil	05/18/22 00:00	05/18/22 18:00

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

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

Page 1 of 2

Client: Noble / Tasman

Project Manager:

Jacob Whritenour Invoice: Jeff White

Address: 6855 W. 119th Ave

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield/ CO/ 80020

Phone: 503-915-3046

Project Name: Lilli Unit C-9

Sampler Name: Martin Medeiros

Project Number:

					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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
Martin Medeiros	5/18 5:53	Tasman's Lock Box		Same Day	72 hours	
				24 hours	Standard	X
				48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:		
Tasman's Lock Box	5/18/22 1800		5/18/22 1800	Temperature Upon Receipt:	64	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact:	(Yes) No	

Summit Scientific

S₂

2205302.2

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

Page 2 of 2

Client: Noble / Tasman

Project Manager:

Jacob Whritenour Invoice: Jeff White

Address: 6855 W. 119th Ave

E-Mail: jwhritenour@tasman-geo.com

City/State/Zip: Broomfield/ CO/ 80020

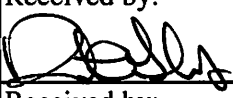
Phone: 503-915-3046

Project Name: Lilli Unit C-9

Sampler Name: Martin Medeiros

Project Number:

					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	Line 01 @ 1'	5/18/22		2			X			X			X	X	X	X	X	X	X		SAR, EC, PH by saturated paste
2	SEP01-DL @ 4'	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓	X		
3	BG01 @ 2.5'	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓	X		
4	BG02 @ 5'	↓		↓			↓			↓			↓	↓	↓	↓	↓	↓	X		
5																					
6																					
7																					
8																					
9																					
10																					

Relinquished by: Martin Medeiros	Date/Time: 5/18 5:53	Received by: Tasman's Lock Box	Date/Time:	Turn Around Time (Check) Same Day — 72 hours — 24 hours — Standard X 48 hours —	Notes:
Relinquished by: Tasman's Lock Box	Date/Time: 5/18/22 1400	Received by: 	Date/Time: 5/18/22 1800	Sample Integrity: Temperature Upon Receipt: 8.4	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: (Yes) No	

S₂2/2
Sample Receipt Checklist

S2 Work Order# 2205302

Client: Noble/Husman Client Project ID: Lilli unit C-9

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) 84Thermometer # 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

 51822
 Date/Time



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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01-FL@4'
2205302-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	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: **05/18/22 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0431	108 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0418	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0452	05/20/22	05/20/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.0	112 %	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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01-FL@4'
2205302-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/24/22	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: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0225	67.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0209	62.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0675	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

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

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01-FL@4'
2205302-01 (Soil)

Summit Scientific

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

Calcium	2550	0.0654	mg/L dry	1	BFE0572	05/25/22	05/28/22	EPA 6020B
Magnesium	275	0.0654	"	"	"	"	"	"
Sodium	32.3	0.0654	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.162	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.4		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.590	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 13:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.03		pH Units	1	BFE0573	05/25/22	05/26/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01@0.5'
2205302-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	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: **05/18/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0435	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0452	05/20/22	05/20/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.7	109 %	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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/25/22 08:05

SEP01@0.5'
2205302-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/24/22	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: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0220	65.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0178	53.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.111	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

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

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01@0.5'
2205302-02 (Soil)

Summit Scientific

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

Calcium	1230	0.0575	mg/L dry	1	BFE0572	05/25/22	05/28/22	EPA 6020B
Magnesium	107	0.0575	"	"	"	"	"	"
Sodium	21.7	0.0575	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.159	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.9		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.387	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 13:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.14		pH Units	1	BFE0573	05/25/22	05/26/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SS01@3'
2205302-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	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: **05/18/22 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0430	107 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0452	05/20/22	05/20/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.7	118 %	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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/25/22 08:05

SS01@3'
2205302-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/24/22	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: **05/18/22 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0261	78.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0210	62.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0893	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

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

Date Sampled: **05/18/22 13:55**

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 C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SS01@3'
2205302-03 (Soil)

Summit Scientific

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

Calcium	1360	0.0610	mg/L dry	1	BFE0572	05/25/22	05/28/22	EPA 6020B
Magnesium	148	0.0610	"	"	"	"	"	"
Sodium	18.0	0.0610	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.124	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	82.0		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.326	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 13:55**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.34		pH Units	1	BFE0573	05/25/22	05/26/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

FS01@4'
2205302-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	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: **05/18/22 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0444	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0452	05/20/22	05/20/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.3	114 %	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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/25/22 08:05

FS01@4'
2205302-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/24/22	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: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0190	57.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.120	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

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

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

FS01@4'
2205302-07 (Soil)

Summit Scientific

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

Calcium	1420	0.0584	mg/L dry	1	BFE0572	05/25/22	05/28/22	EPA 6020B
Magnesium	161	0.0584	"	"	"	"	"	"
Sodium	25.8	0.0584	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.173	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.6		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.331	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 14:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.49		pH Units	1	BFE0573	05/25/22	05/26/22	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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST01@0.5'
2205302-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	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: **05/18/22 14:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0452	05/20/22	05/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.6	117 %	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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

08/25/22 08:05

AST01@0.5'
2205302-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/24/22	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: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0432	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

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

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST01@0.5'
2205302-08 (Soil)

Summit Scientific

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

Calcium	2060	0.0672	mg/L dry	1	BFE0572	05/25/22	05/28/22	EPA 6020B
Magnesium	149	0.0672	"	"	"	"	"	"
Sodium	10.4	0.0672	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0596	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	74.4		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.349	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 14:16**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BFE0573	05/25/22	05/26/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST02@0.5'
2205302-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	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: **05/18/22 14:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0404	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	63	50	mg/kg	1	BFE0452	05/20/22	05/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.5	116 %	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 C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST02@0.5'
2205302-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/25/22	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	0.0139	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: **05/18/22 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0233	70.0 %	40-150		"	"	"	"	
<i>Surrogate: Fluoranthene-d10</i>	0.0210	63.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0766	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

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

Date Sampled: **05/18/22 14:18**

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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST02@0.5'
2205302-09 (Soil)

Summit Scientific

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

Calcium	1380	0.0614	mg/L dry	1	BFE0572	05/25/22	05/28/22	EPA 6020B
Magnesium	87.4	0.0614	"	"	"	"	"	"
Sodium	6.11	0.0614	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0431	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.4		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.252	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 14:18**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.23		pH Units	1	BFE0573	05/25/22	05/26/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST03@0.5'
2205302-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	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: **05/18/22 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0445	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0412	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0426	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0452	05/20/22	05/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.7	109 %	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 C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST03@0.5'
2205302-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/25/22	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: **05/18/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0252	75.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0241	72.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0241	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

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

Date Sampled: **05/18/22 14:20**

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

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

AST03@0.5'
2205302-10 (Soil)

Summit Scientific

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

Calcium	438	0.0521	mg/L dry	1	BFE0572	05/25/22	05/29/22	EPA 6020B
Magnesium	41.1	0.0521	"	"	"	"	"	"
Sodium	2.92	0.0521	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0358	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.9		%	1	BFE0607	05/26/22	05/27/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.168	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 14:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.68		pH Units	1	BFE0573	05/25/22	05/26/22	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 C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01-DL@4'
2205302-11 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.014	0.0020	mg/kg	1	BFE0451	05/20/22	05/20/22	EPA 8260B	
Toluene	0.049	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: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0389	97.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0408	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BFE0452	05/20/22	05/21/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	14.8	118 %	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 C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01-DL@4'
2205302-11 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BFE0487	05/23/22	05/25/22	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	0.0126	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	0.0231	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	0.0272	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0213	63.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0205	61.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0625	0.0100	mg/L	1	BFE0581	05/25/22	05/30/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **05/18/22 00:00**

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01-DL@4'
2205302-11 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	4.57	0.238	mg/kg dry	1	BFH0451	08/22/22	08/23/22	EPA 6020B
Barium	61.6	0.476	"	"	"	"	"	"
Cadmium	0.435	0.238	"	"	"	"	"	"
Copper	14.0	0.476	"	"	"	"	"	"
Lead	8.37	0.238	"	"	"	"	"	"
Nickel	5.00	0.476	"	"	"	"	"	"
Selenium	0.475	0.309	"	"	"	"	"	"
Silver	ND	0.0238	"	"	"	"	"	"
Zinc	28.9	0.476	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFH0478	08/23/22	08/24/22	EPA 7196A	I-02

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

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1390	0.0594	mg/L dry	1	BFE0572	05/25/22	05/29/22	EPA 6020B	
Magnesium	146	0.0594	"	"	"	"	"	"	
Sodium	16.0	0.0594	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.109	0.00100	units	1	BFE0686	05/29/22	05/29/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 00:00**

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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

SEP01-DL@4'
2205302-11 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.1	%	1	BFE0607	05/26/22	05/27/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.438	0.0100	mmhos/cm	1	BFE0574	05/25/22	05/26/22	EPA 120.1	

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

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.04		pH Units	1	BFE0573	05/25/22	05/26/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

BG01@2.5'
2205302-12 (Soil)

Summit Scientific

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

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.71			pH Units	1	BFF0206	06/08/22	06/09/22	EPA 9045D	I-02

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

BG02@5'
2205302-13 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Arsenic	13.6	0.208	mg/kg dry	1	BFF0105	06/03/22	06/07/22	EPA 6020B	
Barium	36.6	0.415	"	"	"	"	"	"	
Cadmium	ND	0.208	"	"	"	"	"	"	
Copper	2.45	0.415	"	"	"	"	"	"	
Lead	3.56	0.208	"	"	"	"	"	"	
Nickel	3.09	0.415	"	"	"	"	"	"	
Selenium	0.634	0.270	"	"	"	"	"	"	
Silver	ND	0.0208	"	"	"	"	"	"	
Zinc	7.31	0.415	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFF0138	06/06/22	06/06/22	EPA 7196A	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	96.3		%	1	BFF0143	06/06/22	06/06/22	Calculation	

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

Date Sampled: **05/18/22 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.71		pH Units	1	BFF0206	06/08/22	06/09/22	EPA 9045D	I-02

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFE0451 - EPA 5030 Soil MS

Blank (BFE0451-BLK1)

Prepared & Analyzed: 05/20/22

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	0.0427		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0410		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0403		"	0.0400		101	50-150			

LCS (BFE0451-BS1)

Prepared & Analyzed: 05/20/22

Benzene	0.118	0.0020	mg/kg	0.125		94.8	70-130			
Toluene	0.115	0.0050	"	0.125		91.9	70-130			
Ethylbenzene	0.113	0.0050	"	0.125		90.0	70-130			
m,p-Xylene	0.218	0.010	"	0.250		87.2	70-130			
o-Xylene	0.109	0.0050	"	0.125		87.2	70-130			
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.125		92.4	70-130			
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.125		91.7	70-130			
Naphthalene	0.107	0.0038	"	0.125		85.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0429		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0412		"	0.0400		103	50-150			
Surrogate: 4-Bromofluorobenzene	0.0408		"	0.0400		102	50-150			

Matrix Spike (BFE0451-MS1)

Source: 2205301-01

Prepared & Analyzed: 05/20/22

Benzene	0.128	0.0020	mg/kg	0.125	ND	102	70-130			
Toluene	0.125	0.0050	"	0.125	ND	99.8	70-130			
Ethylbenzene	0.117	0.0050	"	0.125	ND	93.6	70-130			
m,p-Xylene	0.227	0.010	"	0.250	0.00519	88.7	70-130			
o-Xylene	0.113	0.0050	"	0.125	ND	90.1	70-130			
1,2,4-Trimethylbenzene	0.123	0.0050	"	0.125	ND	98.5	70-130			
1,3,5-Trimethylbenzene	0.121	0.0050	"	0.125	ND	96.7	70-130			
Naphthalene	0.125	0.0038	"	0.125	ND	100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0478		"	0.0400		120	50-150			
Surrogate: Toluene-d8	0.0428		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	50-150			

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFE0451 - EPA 5030 Soil MS

Matrix Spike Dup (BFE0451-MSD1)	Source: 2205301-01			Prepared & Analyzed: 05/20/22						
Benzene	0.123	0.0020	mg/kg	0.125	ND	98.5	70-130	3.61	30	
Toluene	0.117	0.0050	"	0.125	ND	93.4	70-130	6.61	30	
Ethylbenzene	0.115	0.0050	"	0.125	ND	91.7	70-130	2.12	30	
m,p-Xylene	0.223	0.010	"	0.250	0.00519	87.0	70-130	1.85	30	
o-Xylene	0.111	0.0050	"	0.125	ND	88.8	70-130	1.53	30	
1,2,4-Trimethylbenzene	0.117	0.0050	"	0.125	ND	93.3	70-130	5.43	30	
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.125	ND	92.8	70-130	4.20	30	
Naphthalene	0.111	0.0038	"	0.125	ND	89.2	70-130	11.7	30	
Surrogate: 1,2-Dichloroethane-d4	0.0458		"	0.0400		114	50-150			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	50-150			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	50-150			

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFE0452 - EPA 3550A

Blank (BFE0452-BLK1)

Prepared & Analyzed: 05/20/22

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

LCS (BFE0452-BS1)

Prepared & Analyzed: 05/20/22

C10-C28 (DRO)	441	50	mg/kg	500	88.1	70-130
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Matrix Spike (BFE0452-MS1)

Source: 2205301-01

Prepared & Analyzed: 05/20/22

C10-C28 (DRO)	417	50	mg/kg	500	7.93	81.9	70-130
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Matrix Spike Dup (BFE0452-MSD1)

Source: 2205301-01

Prepared & Analyzed: 05/20/22

C10-C28 (DRO)	432	50	mg/kg	500	7.93	84.8	70-130	3.43	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFE0487 - EPA 5030 Soil MS

Blank (BFE0487-BLK1)

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

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	0.0278		"	0.0333		83.5	40-150			
Surrogate: Fluoranthene-d10	0.0241		"	0.0333		72.2	40-150			

LCS (BFE0487-BS1)

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

Acenaphthene	0.0299	0.00500	mg/kg	0.0333		89.7	31-137			
Anthracene	0.0313	0.00500	"	0.0333		93.8	30-120			
Benzo (a) anthracene	0.0282	0.00500	"	0.0333		84.8	30-120			
Benzo (a) pyrene	0.0293	0.00500	"	0.0333		87.9	30-120			
Benzo (b) fluoranthene	0.0289	0.00500	"	0.0333		86.7	30-120			
Benzo (k) fluoranthene	0.0320	0.00500	"	0.0333		96.0	30-120			
Chrysene	0.0309	0.00500	"	0.0333		92.6	30-120			
Dibenz (a,h) anthracene	0.0293	0.00500	"	0.0333		88.0	30-120			
Fluoranthene	0.0336	0.00500	"	0.0333		101	30-120			
Fluorene	0.0288	0.00500	"	0.0333		86.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0283	0.00500	"	0.0333		85.0	30-120			
Pyrene	0.0302	0.00500	"	0.0333		90.6	35-142			
1-Methylnaphthalene	0.0265	0.00500	"	0.0333		79.5	35-142			
2-Methylnaphthalene	0.0283	0.00500	"	0.0333		84.9	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0289		"	0.0333		86.7	40-150			
Surrogate: Fluoranthene-d10	0.0311		"	0.0333		93.3	40-150			

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFE0487 - EPA 5030 Soil MS

Matrix Spike (BFE0487-MS1)			Source: 2205289-01		Prepared: 05/23/22 Analyzed: 05/27/22						
Acenaphthene	0.0282	0.00500	mg/kg	0.0333	ND	84.5	31-137				
Anthracene	0.0278	0.00500	"	0.0333	ND	83.5	30-120				
Benzo (a) anthracene	0.0286	0.00500	"	0.0333	ND	85.9	30-120				
Benzo (a) pyrene	0.0190	0.00500	"	0.0333	ND	57.1	30-120				QM-07
Benzo (b) fluoranthene	0.0245	0.00500	"	0.0333	ND	73.5	30-120				
Benzo (k) fluoranthene	0.0281	0.00500	"	0.0333	ND	84.2	30-120				
Chrysene	0.0286	0.00500	"	0.0333	ND	85.9	30-120				
Dibenz (a,h) anthracene	0.0226	0.00500	"	0.0333	ND	67.9	30-120				
Fluoranthene	0.0277	0.00500	"	0.0333	ND	83.0	30-120				
Fluorene	0.0286	0.00500	"	0.0333	ND	85.9	30-120				
Indeno (1,2,3-cd) pyrene	0.0176	0.00500	"	0.0333	ND	52.7	30-120				
Pyrene	0.0283	0.00500	"	0.0333	ND	84.8	35-142				
1-Methylnaphthalene	0.0284	0.00500	"	0.0333	ND	85.2	15-130				
2-Methylnaphthalene	0.0269	0.00500	"	0.0333	ND	80.6	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0391		"	0.0333		117	40-150				
Surrogate: Fluoranthene-d10	0.0287		"	0.0333		86.0	40-150				

Matrix Spike Dup (BFE0487-MSD1)			Source: 2205289-01		Prepared: 05/23/22 Analyzed: 05/27/22						
Acenaphthene	0.0307	0.00500	mg/kg	0.0333	ND	92.0	31-137	8.43	30		
Anthracene	0.0318	0.00500	"	0.0333	ND	95.5	30-120	13.5	30		
Benzo (a) anthracene	0.0329	0.00500	"	0.0333	ND	98.6	30-120	13.8	30		
Benzo (a) pyrene	0.0267	0.00500	"	0.0333	ND	80.1	30-120	33.5	30		QM-07
Benzo (b) fluoranthene	0.0267	0.00500	"	0.0333	ND	80.1	30-120	8.52	30		
Benzo (k) fluoranthene	0.0302	0.00500	"	0.0333	ND	90.5	30-120	7.24	30		
Chrysene	0.0324	0.00500	"	0.0333	ND	97.2	30-120	12.4	30		
Dibenz (a,h) anthracene	0.0234	0.00500	"	0.0333	ND	70.2	30-120	3.32	30		
Fluoranthene	0.0313	0.00500	"	0.0333	ND	93.8	30-120	12.3	30		
Fluorene	0.0317	0.00500	"	0.0333	ND	95.2	30-120	10.2	30		
Indeno (1,2,3-cd) pyrene	0.0206	0.00500	"	0.0333	ND	61.7	30-120	15.8	30		
Pyrene	0.0322	0.00500	"	0.0333	ND	96.6	35-142	12.9	30		
1-Methylnaphthalene	0.0196	0.00500	"	0.0333	ND	58.8	15-130	36.6	50		
2-Methylnaphthalene	0.0276	0.00500	"	0.0333	ND	82.7	15-130	2.55	50		
Surrogate: 2-Methylnaphthalene-d10	0.0412		"	0.0333		124	40-150				
Surrogate: Fluoranthene-d10	0.0328		"	0.0333		98.4	40-150				

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFE0581 - EPA 3050B

Blank (BFE0581-BLK1)

Prepared: 05/25/22 Analyzed: 05/30/22

Boron ND 0.0100 mg/L

LCS (BFE0581-BS1)

Prepared: 05/25/22 Analyzed: 05/30/22

Boron 5.56 0.0100 mg/L 5.00 111 80-120

Duplicate (BFE0581-DUP1)

Source: 2205302-01

Prepared: 05/25/22 Analyzed: 05/30/22

Boron 0.0661 0.0100 mg/L 0.0675 2.18 20

Matrix Spike (BFE0581-MS1)

Source: 2205302-01

Prepared: 05/25/22 Analyzed: 05/30/22

Boron 5.54 0.0100 mg/L 5.00 0.0675 109 75-125

Matrix Spike Dup (BFE0581-MSD1)

Source: 2205302-01

Prepared: 05/25/22 Analyzed: 05/30/22

Boron 5.83 0.0100 mg/L 5.00 0.0675 115 75-125 5.15 25

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFF0105 - EPA 3050B

Blank (BFF0105-BLK1)

Prepared: 06/03/22 Analyzed: 06/07/22

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 (BFF0105-BS1)

Prepared: 06/03/22 Analyzed: 06/07/22

Arsenic	8.60	0.200	mg/kg wet	8.00	107	80-120
Barium	8.64	0.400	"	8.00	108	80-120
Cadmium	0.476	0.200	"	0.400	119	80-120
Copper	8.32	0.400	"	8.00	104	80-120
Lead	4.52	0.200	"	4.00	113	80-120
Nickel	8.27	0.400	"	8.00	103	80-120
Selenium	0.803	0.260	"	0.800	100	80-120
Silver	0.463	0.0200	"	0.400	116	80-120
Zinc	8.65	0.400	"	8.00	108	80-120

Duplicate (BFF0105-DUP1)

Source: 2203107-01

Prepared: 06/03/22 Analyzed: 06/07/22

Arsenic	0.431	0.205	mg/kg dry	0.460	6.43	20
Barium	12.3	0.411	"	13.3	8.01	20
Cadmium	0.0241	0.205	"	0.0269	11.0	20
Copper	1.26	0.411	"	1.30	3.36	20
Lead	1.37	0.205	"	1.58	14.1	20
Nickel	1.12	0.411	"	1.29	14.5	20
Selenium	0.196	0.267	"	0.315	46.3	20
Silver	0.00723	0.0205	"	0.00702	2.96	20
Zinc	5.28	0.411	"	5.07	4.09	20

QR-01

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFF0105 - EPA 3050B

Matrix Spike (BFF0105-MS1)		Source: 2203107-01			Prepared: 06/03/22 Analyzed: 06/07/22					
Arsenic	9.32	0.205	mg/kg dry	8.22	0.460	108	75-125			
Barium	21.5	0.411	"	8.22	13.3	99.2	75-125			
Cadmium	0.494	0.205	"	0.411	0.0269	114	75-125			
Copper	9.71	0.411	"	8.22	1.30	102	75-125			
Lead	5.88	0.205	"	4.11	1.58	105	75-125			
Nickel	9.73	0.411	"	8.22	1.29	103	75-125			
Selenium	0.998	0.267	"	0.822	0.315	83.1	75-125			
Silver	0.461	0.0205	"	0.411	0.00702	111	75-125			
Zinc	14.6	0.411	"	8.22	5.07	116	75-125			

Matrix Spike Dup (BFF0105-MSD1)		Source: 2203107-01			Prepared: 06/03/22 Analyzed: 06/07/22					
Arsenic	8.72	0.205	mg/kg dry	8.22	0.460	100	75-125	6.74	25	
Barium	20.7	0.411	"	8.22	13.3	89.6	75-125	3.73	25	
Cadmium	0.460	0.205	"	0.411	0.0269	105	75-125	7.14	25	
Copper	9.26	0.411	"	8.22	1.30	96.8	75-125	4.76	25	
Lead	5.52	0.205	"	4.11	1.58	95.7	75-125	6.35	25	
Nickel	9.15	0.411	"	8.22	1.29	95.6	75-125	6.16	25	
Selenium	1.01	0.267	"	0.822	0.315	84.5	75-125	1.14	25	
Silver	0.421	0.0205	"	0.411	0.00702	101	75-125	9.17	25	
Zinc	13.8	0.411	"	8.22	5.07	106	75-125	5.62	25	

Batch BFH0451 - EPA 3050B

Blank (BFH0451-BLK1)		Prepared: 08/22/22 Analyzed: 08/23/22								
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	"							

Summit Scientific

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

Project: Noble - Lilli Unit C-9
Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFH0451 - EPA 3050B

LCS (BFH0451-BS1)

Prepared: 08/22/22 Analyzed: 08/23/22

Arsenic	44.9	0.200	mg/kg wet	40.0		112	80-120			
Barium	46.0	0.400	"	40.0		115	80-120			
Cadmium	2.35	0.200	"	2.00		118	80-120			
Copper	42.6	0.400	"	40.0		107	80-120			
Lead	22.2	0.200	"	20.0		111	80-120			
Nickel	41.4	0.400	"	40.0		104	80-120			
Selenium	4.27	0.260	"	4.00		107	80-120			
Silver	2.29	0.0200	"	2.00		114	80-120			
Zinc	45.3	0.400	"	40.0		113	80-120			

Duplicate (BFH0451-DUP1)

Source: 2205302-11

Prepared: 08/22/22 Analyzed: 08/23/22

Arsenic	4.17	0.238	mg/kg dry		4.57			9.21	20	
Barium	74.1	0.476	"		61.6			18.4	20	
Cadmium	0.613	0.238	"		0.435			34.0	20	QR-03
Copper	14.9	0.476	"		14.0			6.36	20	
Lead	9.89	0.238	"		8.37			16.7	20	
Nickel	6.09	0.476	"		5.00			19.6	20	
Selenium	0.642	0.309	"		0.475			29.9	20	QR-03
Silver	0.0187	0.0238	"		0.0180			3.87	20	
Zinc	29.8	0.476	"		28.9			2.98	20	

Matrix Spike (BFH0451-MS1)

Source: 2205302-11

Prepared: 08/22/22 Analyzed: 08/23/22

Arsenic	56.8	0.238	mg/kg dry	47.6	4.57	110	75-125			
Barium	100	0.476	"	47.6	61.6	81.6	75-125			
Cadmium	3.16	0.238	"	2.38	0.435	114	75-125			
Copper	55.8	0.476	"	47.6	14.0	88.0	75-125			
Lead	32.4	0.238	"	23.8	8.37	101	75-125			
Nickel	53.9	0.476	"	47.6	5.00	103	75-125			
Selenium	5.16	0.309	"	4.76	0.475	98.5	75-125			
Silver	2.56	0.0238	"	2.38	0.0180	107	75-125			
Zinc	94.0	0.476	"	47.6	28.9	137	75-125			QM-05

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFH0451 - EPA 3050B

Matrix Spike Dup (BFH0451-MSD1)		Source: 2205302-11			Prepared: 08/22/22 Analyzed: 08/23/22					
Arsenic	56.5	0.238	mg/kg dry	47.6	4.57	109	75-125	0.520	25	
Barium	109	0.476	"	47.6	61.6	98.8	75-125	7.82	25	QM-05
Cadmium	3.34	0.238	"	2.38	0.435	122	75-125	5.62	25	
Copper	55.6	0.476	"	47.6	14.0	87.5	75-125	0.371	25	
Lead	34.0	0.238	"	23.8	8.37	108	75-125	4.84	25	
Nickel	53.1	0.476	"	47.6	5.00	101	75-125	1.63	25	
Selenium	5.22	0.309	"	4.76	0.475	99.7	75-125	1.07	25	
Silver	2.70	0.0238	"	2.38	0.0180	113	75-125	5.09	25	
Zinc	81.5	0.476	"	47.6	28.9	111	75-125	14.2	25	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFF0138 - 3060A Mod

Blank (BFF0138-BLK1)

Prepared & Analyzed: 06/06/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFF0138-BS1)

Prepared & Analyzed: 06/06/22

Chromium, Hexavalent 27.0 0.30 mg/kg wet 25.0 108 80-120

Duplicate (BFF0138-DUP1)

Source: 2205302-01

Prepared & Analyzed: 06/06/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFF0138-MS1)

Source: 2205302-01

Prepared & Analyzed: 06/06/22

Chromium, Hexavalent 36.8 0.30 mg/kg dry 32.7 ND 112 75-125

Matrix Spike Dup (BFF0138-MSD1)

Source: 2205302-01

Prepared & Analyzed: 06/06/22

Chromium, Hexavalent 38.2 0.30 mg/kg dry 32.7 ND 117 75-125 3.84 20

Batch BFH0478 - 3060A Mod

Blank (BFH0478-BLK1)

Prepared: 08/23/22 Analyzed: 08/24/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFH0478-BS1)

Prepared: 08/23/22 Analyzed: 08/24/22

Chromium, Hexavalent 24.4 0.30 mg/kg wet 25.0 97.8 80-120

Duplicate (BFH0478-DUP1)

Source: 2208288-08

Prepared: 08/23/22 Analyzed: 08/24/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFH0478-MS1)

Source: 2208288-08

Prepared: 08/23/22 Analyzed: 08/24/22

Chromium, Hexavalent 27.5 0.30 mg/kg dry 27.5 ND 99.8 75-125

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BFH0478 - 3060A Mod

Matrix Spike Dup (BFH0478-MSD1)		Source: 2208288-08			Prepared: 08/23/22 Analyzed: 08/24/22						
Chromium, Hexavalent		28.0	0.30	mg/kg dry	27.5	ND	102	75-125	1.79	20	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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

Summit Scientific

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

Batch BFE0572 - General Preparation

Blank (BFE0572-BLK1)

Prepared: 05/25/22 Analyzed: 05/28/22

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

LCS (BFE0572-BS1)

Prepared: 05/25/22 Analyzed: 05/28/22

Calcium	572	0.0500	mg/L wet	500	114	70-130
Magnesium	541	0.0500	"	500	108	70-130
Sodium	500	0.0500	"	500	100	70-130

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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

Summit Scientific

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

Batch BFE0607 - General Preparation

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

Batch BFF0143 - General Preparation

Duplicate (BFF0143-DUP1)		Source: 2205269-01			Prepared & Analyzed: 06/06/22						
% Solids	95.7		%		95.9			0.212		20	

Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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 BFE0574 - General Preparation

Blank (BFE0574-BLK1)

Prepared: 05/25/22 Analyzed: 05/26/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFE0574-BS1)

Prepared: 05/25/22 Analyzed: 05/26/22

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

Duplicate (BFE0574-DUP1)

Source: 2205302-01

Prepared: 05/25/22 Analyzed: 05/26/22

Specific Conductance (EC) 0.573 0.0100 mmhos/cm 0.590 2.82 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 C-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

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

Summit Scientific

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

Batch BFE0573 - General Preparation

LCS (BFE0573-BS1)

Prepared: 05/25/22 Analyzed: 05/26/22

pH	9.01	pH Units	9.18	98.1	95-105
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Duplicate (BFE0573-DUP1)

Source: 2205302-01

Prepared: 05/25/22 Analyzed: 05/26/22

pH	8.00	pH Units	8.03	0.374	20
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Batch BFF0206 - General Preparation

LCS (BFF0206-BS1)

Prepared: 06/08/22 Analyzed: 06/09/22

pH	9.03	pH Units	9.18	98.4	95-105
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Duplicate (BFF0206-DUP1)

Source: 2205269-04

Prepared: 06/08/22 Analyzed: 06/09/22

pH	8.34	pH Units	8.34	0.00	20
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Summit Scientific

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

Project: Noble - Lilli Unit C-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
08/25/22 08:05

Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
I-02	This sample was analyzed outside of the recommended holding time.
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