

TABLE 1
SOIL SAMPLE LOCATIONS
NOBLE ENERGY, INC. - LILLI UNIT 6-9

Soil Sample ID	Date	PID Reading (ppm)	Visual	Olfactory	Sample Type (Grab/Lab)	Latitude	Longitude	PDOP
SS01@0.5'	09/14/22	2.0	HC Staining	Slight HC Odor	Lab	40.67893111	-103.8702145	1.3
SS02@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.67897206	-103.8702427	1.2
SS03@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.67898079	-103.8702216	1.0
SS04@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.6789709	-103.8701723	1.0
SS05@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.6789527	-103.8701587	1.0
SS06@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.67892514	-103.8701803	1.0
SS07@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.6789074	-103.8702045	1.0
SS08@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.67891561	-103.8702452	1.0
SS09@2'	09/29/22	0.0	No Staining	No Odor	Lab	40.67894402	-103.8702562	1.0
FS01@3'	09/29/22	0.0	No Staining	No Odor	Lab	40.67894023	-103.8702363	1.0
FS02@3'	09/29/22	0.0	No Staining	No Odor	Lab	40.67895227	-103.8701943	1.0

Notes:

HC = Hydrocarbon

PID = Photo-ionization detector

ppm = parts per million

PDOP = Position dilution of precision

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 6-9



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
SS01@0.5'	09/14/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	2,000	980	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS02@2'	09/29/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS03@2'	09/29/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
SS04@2'	09/29/22	<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
SS05@2'	09/29/22	<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
SS06@2'	09/29/22	<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
SS07@2'	09/29/22	<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
SS08@2'	09/29/22	<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
SS09@2'	09/29/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FS01@3'	09/29/22	<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
FS02@3'	09/29/22	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Soil Sample ID	Date	pH	SAR	EC (mmhos/cm)	Boron (mg/L)
Residential SSL ²		6 - 8.3	<6	<4mmhos/cm	2
SS01@0.5'	09/14/22	7.84	2.06	0.186	0.380
SS02@2'	09/29/22	7.71	0.539	0.512	0.187
SS03@2'	09/29/22	7.83	0.913	0.499	0.0961
SS04@2'	09/29/22	7.63	0.400	0.175	0.101
SS05@2'	09/29/22	8.10	1.25	0.212	0.0762
SS06@2'	09/29/22	7.83	3.82	0.594	0.236
SS07@2'	09/29/22	8.14	4.06	0.365	0.105
SS08@2'	09/29/22	7.98	6.09	1.41	0.0859
SS09@2'	09/29/22	8.11	2.08	0.216	0.0491
FS01@3'	09/29/22	7.93	1.02	0.252	0.0589
FS02@3'	09/29/22	8.04	0.623	0.196	0.0488

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
SS01@0.5'	09/14/22	1.53	130	<0.243	<0.30	6.61	10.1	3.82	0.847	0.0400	19.3
SS02@2'	09/29/22	3.24	162	0.320	<0.30	9.33	16.9	5.43	1.11	0.0513	26.9
SS03@2'	09/29/22	1.71	61.5	<0.217	<0.30	3.26	4.98	1.89	0.496	<0.0217	8.28
SS04@2'	09/29/22	1.82	33.8	<0.216	<0.30	2.05	4.45	1.38	0.368	<0.0216	5.13
SS05@2'	09/29/22	2.50	27.5	<0.212	<0.30	1.81	3.50	1.02	<0.275	<0.0212	4.32
SS06@2'	09/29/22	3.64	119	<0.273	<0.30	8.40	12.6	4.52	0.973	0.0336	25.0
SS07@2'	09/29/22	2.18	37.6	<0.230	<0.30	3.09	4.28	1.58	0.591	<0.0230	5.91
SS08@2'	09/29/22	3.36	126	<0.232	<0.30	6.13	9.18	3.90	0.630	<0.0232	14.9
SS09@2'	09/29/22	1.73	53.1	<0.211	<0.30	2.33	4.22	1.44	0.281	<0.0211	6.03
FS01@3'	09/29/22	1.49	21.3	0.240	<0.30	2.74	4.79	1.38	0.340	<0.0226	6.33
FS02@3'	09/29/22	2.37	74.5	<0.236	<0.30	4.44	6.57	2.40	0.392	<0.0236	9.98

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)

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) = Benzofluoranthene

Benzo(k) = Benzofluoranthene

Benzo(a) = Benzopyrene

A,H = Dibenzoanthracene

1,2,3-CD = Indenopyrene

1-M = 1-methylnaphthalene

2-M = 2-methylnaphthalene

RP = Results Pending

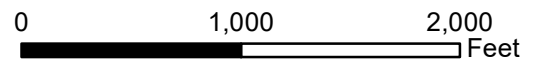
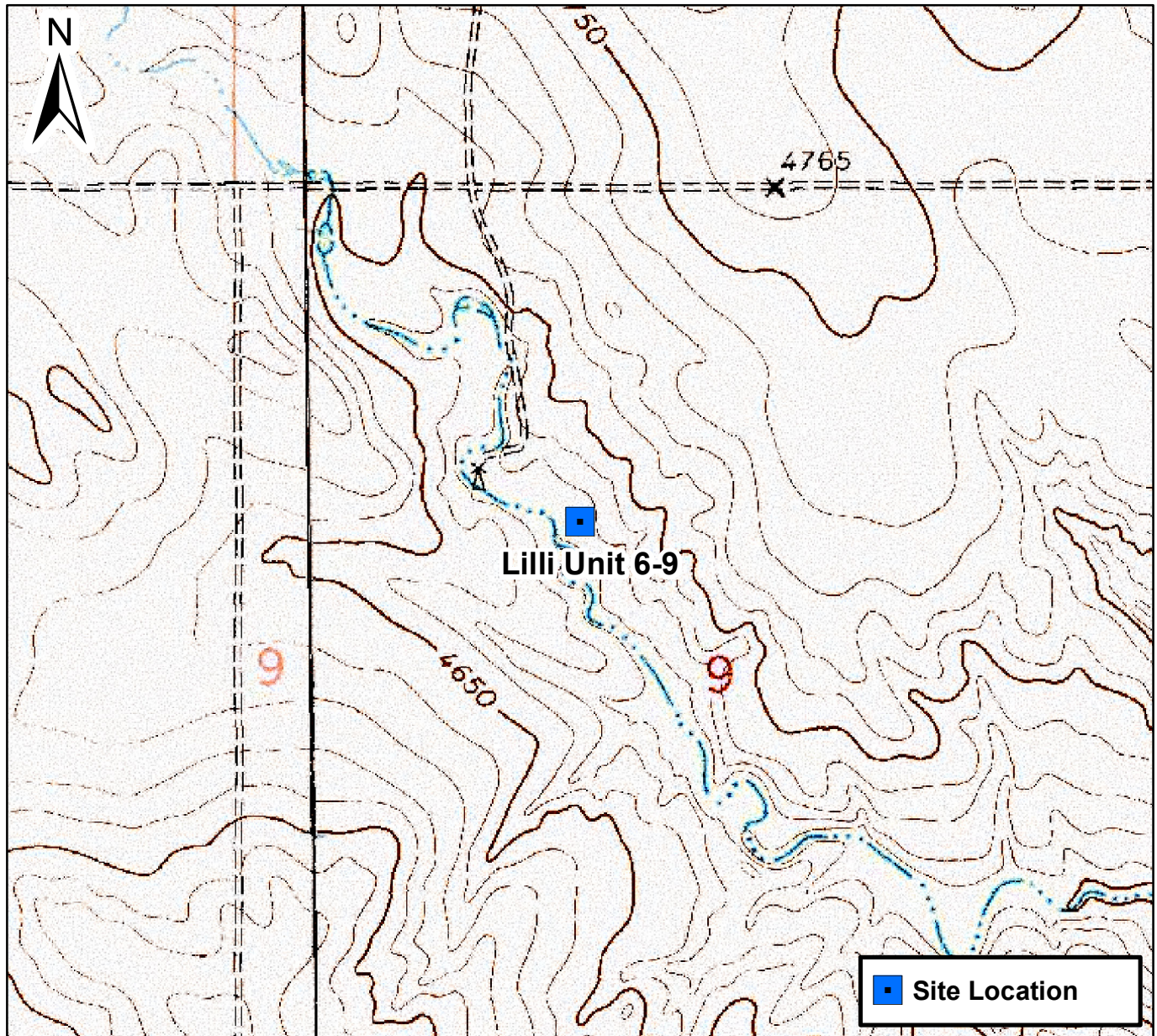


Figure 1

Site Location Map
Lilli Unit 6-9
SENW S9 T8N R58W
Weld County, Colorado





Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

September 20, 2022

Jacob Whritenour

Tasman Geosciences

6855 W. 119th Ave.

Broomfield, CO 80020

RE: Noble - Lilli Unit 6-9

Work Order #2209270

Enclosed are the results of analyses for samples received by Summit Scientific on 09/14/22 17:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Mikayla Axtell For Paul Shrewsbury

President



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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@0.5'	2209270-01	Soil	09/14/22 10:00	09/14/22 17:30

Summit Scientific

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

Summit Scientific

S₂

2209270

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

Page 1 of 1

Client: Noble / Tasman Project Manager: Jake Whritenour Invoice: Erika Zuniga
Address: 6855 W. 119th Ave E-Mail: jwhritenour@tasman-geo.com
City/State/Zip: Broomfield, CO 80020
Phone: 303-827-1511 Project Name: Lilli Unit 9-9
Sampler Name: Hunter Mello Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested								Special Instructions	
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	Metals - 915			
1	SS01 P0.5'	9/14/22	1000	3			X			X				X	X	X	X	X		X		pH, EC, SAR by saturated paste
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						

Relinquished by: <u>[Signature]</u>	Date/Time: <u>9/14/22</u> <u>17:19</u>	Received by: <u>Tasman's Lock Box</u>	Date/Time: <u>9/14/22</u> <u>17:19</u>	Turn Around Time (Check) Same Day <u>X</u> 72 hours <u>—</u> 24 hours <u>—</u> Standard <u>—</u> 48 hours <u>—</u>	Notes:
Relinquished by: <u>Tasman's Lock Box</u>	Date/Time: <u>9/14/22</u> <u>1730</u>	Received by: <u>[Signature]</u>	Date/Time: <u>9/14/22</u> <u>1730</u>	Sample Integrity: Temperature Upon Receipt: <u>7.3</u>	
Relinquished by: <u>—</u>	Date/Time: <u>—</u>	Received by: <u>—</u>	Date/Time: <u>—</u>	Samples Intact: <u>Yes</u> No <u>—</u>	

S₂

Sample Receipt Checklist

S2 Work Order# 2209270Client: Noble Tasman Client Project ID: Lilliunit 9-9Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 7.3Thermometer # (

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

Additional Comments (if any):

⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.9.14.22 
Custodian Printed Name19:30
Date/Time



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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

SS01@0.5'
2209270-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BF10358	09/14/22	09/14/22	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: **09/14/22 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		91.3 %	50-150		"	"	"	"	
Surrogate: Toluene-d8		95.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	2000	50	mg/kg	1	BF10359	09/14/22	09/15/22	EPA 8015M	D-09
C28-C36 (ORO)	980	50	"	"	"	"	"	"	

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		127 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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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 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

09/20/22 14:20

SS01@0.5'
2209270-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10361	09/15/22	09/16/22	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: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		59.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		50.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.380	0.0100	mg/L	1	BF10366	09/15/22	09/17/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/14/22 10:00**

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

SS01@0.5'
2209270-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.53	0.243	mg/kg dry	1	BF10369	09/15/22	09/16/22	EPA 6020B
Barium	130	0.486	"	"	"	"	"	"
Cadmium	ND	0.243	"	"	"	"	"	"
Copper	6.61	0.486	"	"	"	"	"	"
Lead	10.1	0.243	"	"	"	"	"	"
Nickel	3.82	0.486	"	"	"	"	"	"
Selenium	0.847	0.316	"	"	"	"	"	"
Silver	0.0400	0.0243	"	"	"	"	"	"
Zinc	19.3	0.486	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BF10429	09/16/22	09/17/22	EPA 7196A	

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

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.0	0.0608	mg/L dry	1	BF10385	09/15/22	09/17/22	EPA 6020B	
Magnesium	4.40	0.0608	"	"	"	"	"	"	
Sodium	39.1	0.0608	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.06	0.00100	units	1	BF10440	09/19/22	09/19/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

SS01@0.5'
2209270-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	82.3	%	1	BFI0424	09/16/22	09/19/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.186	0.0100	mmhos/cm	1	BFI0418	09/16/22	09/19/22	EPA 120.1	

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

Date Sampled: **09/14/22 10:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.84		pH Units	1	BFI0417	09/16/22	09/19/22	EPA 9045D	

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0358 - EPA 5030 Soil MS

Blank (BFI0358-BLK1)

Prepared: 09/14/22 Analyzed: 09/15/22

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	0.0324		"	0.0400		80.9	50-150			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.4	50-150			

LCS (BFI0358-BS1)

Prepared: 09/14/22 Analyzed: 09/15/22

Benzene	0.0718	0.0020	mg/kg	0.0750		95.8	70-130			
Toluene	0.0654	0.0050	"	0.0750		87.2	70-130			
Ethylbenzene	0.0722	0.0050	"	0.0750		96.3	70-130			
m,p-Xylene	0.139	0.010	"	0.150		92.5	70-130			
o-Xylene	0.0668	0.0050	"	0.0750		89.0	70-130			
1,2,4-Trimethylbenzene	0.0598	0.0050	"	0.0750		79.8	70-130			
1,3,5-Trimethylbenzene	0.0609	0.0050	"	0.0750		81.2	70-130			
Naphthalene	0.0813	0.0038	"	0.0750		108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0315		"	0.0400		78.8	50-150			
Surrogate: Toluene-d8	0.0361		"	0.0400		90.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0352		"	0.0400		88.0	50-150			

Matrix Spike (BFI0358-MS1)

Source: 2209270-01

Prepared: 09/14/22 Analyzed: 09/15/22

Benzene	0.0590	0.0020	mg/kg	0.0750	ND	78.7	70-130			
Toluene	0.0608	0.0050	"	0.0750	ND	81.0	70-130			
Ethylbenzene	0.0656	0.0050	"	0.0750	ND	87.5	70-130			
m,p-Xylene	0.131	0.010	"	0.150	ND	87.4	70-130			
o-Xylene	0.0659	0.0050	"	0.0750	ND	87.9	70-130			
1,2,4-Trimethylbenzene	0.0616	0.0050	"	0.0750	ND	82.1	70-130			
1,3,5-Trimethylbenzene	0.0608	0.0050	"	0.0750	ND	81.0	70-130			
Naphthalene	0.0569	0.0038	"	0.0750	ND	75.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0248		"	0.0400		62.0	50-150			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.2	50-150			

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

09/20/22 14:20

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BFI0358 - EPA 5030 Soil MS

Matrix Spike Dup (BFI0358-MSD1)

Source: 2209270-01

Prepared: 09/14/22 Analyzed: 09/15/22

Benzene	0.0574	0.0020	mg/kg	0.0750	ND	76.6	70-130	2.73	30	
Toluene	0.0613	0.0050	"	0.0750	ND	81.7	70-130	0.787	30	
Ethylbenzene	0.0653	0.0050	"	0.0750	ND	87.1	70-130	0.458	30	
m,p-Xylene	0.129	0.010	"	0.150	ND	86.0	70-130	1.57	30	
o-Xylene	0.0655	0.0050	"	0.0750	ND	87.3	70-130	0.685	30	
1,2,4-Trimethylbenzene	0.0622	0.0050	"	0.0750	ND	83.0	70-130	1.11	30	
1,3,5-Trimethylbenzene	0.0613	0.0050	"	0.0750	ND	81.7	70-130	0.885	30	
Naphthalene	0.0598	0.0038	"	0.0750	ND	79.7	70-130	4.83	30	
Surrogate: 1,2-Dichloroethane-d4	0.0252		"	0.0400		63.0	50-150			
Surrogate: Toluene-d8	0.0373		"	0.0400		93.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0365		"	0.0400		91.3	50-150			

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BFI0359 - EPA 3550A

Blank (BFI0359-BLK1)

Prepared: 09/14/22 Analyzed: 09/15/22

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

LCS (BFI0359-BS1)

Prepared: 09/14/22 Analyzed: 09/15/22

C10-C28 (DRO)	564	50	mg/kg	500	113	70-130
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Matrix Spike (BFI0359-MS1)

Source: 2209271-01

Prepared: 09/14/22 Analyzed: 09/15/22

C10-C28 (DRO)	501	50	mg/kg	500	13.5	97.5	70-130
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Matrix Spike Dup (BFI0359-MSD1)

Source: 2209271-01

Prepared: 09/14/22 Analyzed: 09/15/22

C10-C28 (DRO)	579	50	mg/kg	500	13.5	113	70-130	14.4	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0361 - EPA 5030 Soil MS

Blank (BFI0361-BLK1)

Prepared & Analyzed: 09/15/22

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	0.0222		"	0.0333		66.7	40-150			
Surrogate: Fluoranthene-d10	0.0279		"	0.0333		83.8	40-150			

LCS (BFI0361-BS1)

Prepared & Analyzed: 09/15/22

Acenaphthene	0.0379	0.00500	mg/kg	0.0333		114	31-137			
Anthracene	0.0254	0.00500	"	0.0333		76.1	30-120			
Benzo (a) anthracene	0.0345	0.00500	"	0.0333		103	30-120			
Benzo (a) pyrene	0.0170	0.00500	"	0.0333		50.9	30-120			
Benzo (b) fluoranthene	0.0136	0.00500	"	0.0333		40.8	30-120			
Benzo (k) fluoranthene	0.0134	0.00500	"	0.0333		40.1	30-120			
Chrysene	0.0371	0.00500	"	0.0333		111	30-120			
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333		43.0	30-120			
Fluoranthene	0.0238	0.00500	"	0.0333		71.3	30-120			
Fluorene	0.0325	0.00500	"	0.0333		97.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0191	0.00500	"	0.0333		57.2	30-120			
Pyrene	0.0369	0.00500	"	0.0333		111	35-142			
1-Methylnaphthalene	0.0189	0.00500	"	0.0333		56.8	35-142			
2-Methylnaphthalene	0.0240	0.00500	"	0.0333		71.9	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0196		"	0.0333		58.9	40-150			
Surrogate: Fluoranthene-d10	0.0205		"	0.0333		61.5	40-150			

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

09/20/22 14:20

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BFI0361 - EPA 5030 Soil MS

Matrix Spike (BFI0361-MS1)

Source: 2209230-01

Prepared & Analyzed: 09/15/22

Acenaphthene	0.0253	0.00500	mg/kg	0.0333	ND	75.8	31-137			
Anthracene	0.0150	0.00500	"	0.0333	ND	45.0	30-120			
Benzo (a) anthracene	0.0185	0.00500	"	0.0333	ND	55.4	30-120			
Benzo (a) pyrene	0.0201	0.00500	"	0.0333	ND	60.2	30-120			
Benzo (b) fluoranthene	0.0136	0.00500	"	0.0333	ND	40.8	30-120			
Benzo (k) fluoranthene	0.0165	0.00500	"	0.0333	ND	49.6	30-120			
Chrysene	0.0168	0.00500	"	0.0333	ND	50.5	30-120			
Dibenz (a,h) anthracene	0.0159	0.00500	"	0.0333	ND	47.6	30-120			
Fluoranthene	0.0145	0.00500	"	0.0333	ND	43.4	30-120			
Fluorene	0.0162	0.00500	"	0.0333	ND	48.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0144	0.00500	"	0.0333	ND	43.1	30-120			
Pyrene	0.0156	0.00500	"	0.0333	ND	46.8	35-142			
1-Methylnaphthalene	0.0137	0.00500	"	0.0333	ND	41.2	15-130			
2-Methylnaphthalene	0.0206	0.00500	"	0.0333	ND	61.8	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0136		"	0.0333		40.7	40-150			
Surrogate: Fluoranthene-d10	0.0147		"	0.0333		44.0	40-150			

Matrix Spike Dup (BFI0361-MSD1)

Source: 2209230-01

Prepared & Analyzed: 09/15/22

Acenaphthene	0.0226	0.00500	mg/kg	0.0333	ND	67.7	31-137	11.2	30	
Anthracene	0.0136	0.00500	"	0.0333	ND	40.9	30-120	9.47	30	
Benzo (a) anthracene	0.0156	0.00500	"	0.0333	ND	46.8	30-120	16.9	30	
Benzo (a) pyrene	0.0193	0.00500	"	0.0333	ND	57.8	30-120	4.01	30	
Benzo (b) fluoranthene	0.0137	0.00500	"	0.0333	ND	41.0	30-120	0.440	30	
Benzo (k) fluoranthene	0.0140	0.00500	"	0.0333	ND	41.9	30-120	16.8	30	
Chrysene	0.0144	0.00500	"	0.0333	ND	43.3	30-120	15.5	30	
Dibenz (a,h) anthracene	0.0134	0.00500	"	0.0333	ND	40.1	30-120	17.1	30	
Fluoranthene	0.0184	0.00500	"	0.0333	ND	55.3	30-120	24.1	30	
Fluorene	0.0149	0.00500	"	0.0333	ND	44.6	30-120	8.47	30	
Indeno (1,2,3-cd) pyrene	0.0163	0.00500	"	0.0333	ND	49.0	30-120	13.0	30	
Pyrene	0.0139	0.00500	"	0.0333	ND	41.8	35-142	11.2	30	
1-Methylnaphthalene	0.0146	0.00500	"	0.0333	ND	43.9	15-130	6.45	50	
2-Methylnaphthalene	0.0181	0.00500	"	0.0333	ND	54.3	15-130	13.0	50	
Surrogate: 2-Methylnaphthalene-d10	0.0135		"	0.0333		40.5	40-150			
Surrogate: Fluoranthene-d10	0.0142		"	0.0333		42.6	40-150			

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0366 - EPA 3050B

Blank (BFI0366-BLK1)

Prepared: 09/15/22 Analyzed: 09/16/22

Boron ND 0.0100 mg/L

LCS (BFI0366-BS1)

Prepared: 09/15/22 Analyzed: 09/16/22

Boron 5.65 0.0100 mg/L 5.00 113 80-120

Duplicate (BFI0366-DUP1)

Source: 2209132-02

Prepared: 09/15/22 Analyzed: 09/16/22

Boron 0.357 0.0100 mg/L 0.364 2.06 20

Matrix Spike (BFI0366-MS1)

Source: 2209132-02

Prepared: 09/15/22 Analyzed: 09/16/22

Boron 5.93 0.0100 mg/L 5.00 0.364 111 75-125

Matrix Spike Dup (BFI0366-MSD1)

Source: 2209132-02

Prepared: 09/15/22 Analyzed: 09/16/22

Boron 6.02 0.0100 mg/L 5.00 0.364 113 75-125 1.37 25

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0369 - EPA 3050B

Blank (BFI0369-BLK1)

Prepared: 09/15/22 Analyzed: 09/16/22

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 (BFI0369-BS1)

Prepared: 09/15/22 Analyzed: 09/16/22

Arsenic	43.5	0.200	mg/kg wet	40.0	109	80-120
Barium	45.1	0.400	"	40.0	113	80-120
Cadmium	2.36	0.200	"	2.00	118	80-120
Copper	40.4	0.400	"	40.0	101	80-120
Lead	21.7	0.200	"	20.0	108	80-120
Nickel	39.6	0.400	"	40.0	99.1	80-120
Selenium	4.15	0.260	"	4.00	104	80-120
Silver	2.30	0.0200	"	2.00	115	80-120
Zinc	43.4	0.400	"	40.0	109	80-120

Duplicate (BFI0369-DUP1)

Source: 2209187-01

Prepared: 09/15/22 Analyzed: 09/16/22

Arsenic	7.71	0.242	mg/kg dry	8.16	5.67	20	QR-03
Barium	23.3	0.485	"	25.6	9.21	20	
Cadmium	0.185	0.242	"	0.266	35.9	20	
Copper	23.6	0.485	"	25.6	7.89	20	
Lead	14.8	0.242	"	15.4	3.95	20	
Nickel	19.0	0.485	"	24.8	26.6	20	QR-03
Selenium	2.14	0.315	"	2.21	3.34	20	
Silver	0.0716	0.0242	"	0.0726	1.27	20	
Zinc	138	0.485	"	158	13.8	20	

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0369 - EPA 3050B

Matrix Spike (BFI0369-MS1)		Source: 2209187-01			Prepared: 09/15/22 Analyzed: 09/16/22					
Arsenic	59.0	0.242	mg/kg dry	48.5	8.16	105	75-125			
Barium	75.3	0.485	"	48.5	25.6	103	75-125			
Cadmium	3.12	0.242	"	2.42	0.266	118	75-125			
Copper	73.4	0.485	"	48.5	25.6	98.8	75-125			
Lead	46.1	0.242	"	24.2	15.4	127	75-125			
Nickel	70.4	0.485	"	48.5	24.8	94.2	75-125			QM-05
Selenium	7.06	0.315	"	4.85	2.21	100	75-125			
Silver	2.81	0.0242	"	2.42	0.0726	113	75-125			
Zinc	212	0.485	"	48.5	158	112	75-125			

Matrix Spike Dup (BFI0369-MSD1)		Source: 2209187-01			Prepared: 09/15/22 Analyzed: 09/16/22					
Arsenic	57.2	0.242	mg/kg dry	48.5	8.16	101	75-125	2.96	25	
Barium	70.9	0.485	"	48.5	25.6	93.5	75-125	6.04	25	
Cadmium	2.87	0.242	"	2.42	0.266	108	75-125	8.21	25	
Copper	71.5	0.485	"	48.5	25.6	94.7	75-125	2.72	25	
Lead	43.3	0.242	"	24.2	15.4	115	75-125	6.43	25	
Nickel	69.0	0.485	"	48.5	24.8	91.3	75-125	2.06	25	
Selenium	6.69	0.315	"	4.85	2.21	92.3	75-125	5.47	25	
Silver	2.62	0.0242	"	2.42	0.0726	105	75-125	6.96	25	
Zinc	206	0.485	"	48.5	158	98.8	75-125	3.01	25	

Summit Scientific

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



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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0429 - 3060A Mod

Blank (BFI0429-BLK1)

Prepared: 09/16/22 Analyzed: 09/17/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFI0429-BS1)

Prepared: 09/16/22 Analyzed: 09/17/22

Chromium, Hexavalent 25.0 0.30 mg/kg wet 25.0 100 80-120

Duplicate (BFI0429-DUP1)

Source: 2209191-01

Prepared: 09/16/22 Analyzed: 09/17/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFI0429-MS1)

Source: 2209191-01

Prepared: 09/16/22 Analyzed: 09/17/22

Chromium, Hexavalent 34.5 0.30 mg/kg dry 33.2 ND 104 75-125

Matrix Spike Dup (BFI0429-MSD1)

Source: 2209191-01

Prepared: 09/16/22 Analyzed: 09/17/22

Chromium, Hexavalent 36.5 0.30 mg/kg dry 33.2 ND 110 75-125 5.62 20

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0385 - General Preparation

Blank (BFI0385-BLK1)

Prepared: 09/15/22 Analyzed: 09/17/22

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

LCS (BFI0385-BS1)

Prepared: 09/15/22 Analyzed: 09/17/22

Calcium	5.03	0.0500	mg/L wet	5.00	101	70-130
Magnesium	6.20	0.0500	"	5.00	124	70-130
Sodium	6.00	0.0500	"	5.00	120	70-130

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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

Summit Scientific

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

Batch BFI0424 - General Preparation

Duplicate (BFI0424-DUP1)

Source: 2209241-01

Prepared: 09/16/22 Analyzed: 09/19/22

% Solids	95.6	%	96.0	0.483	20
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Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:

09/20/22 14:20

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 BFI0418 - General Preparation

Blank (BFI0418-BLK1)

Prepared: 09/16/22 Analyzed: 09/19/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFI0418-BS1)

Prepared: 09/16/22 Analyzed: 09/19/22

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

Duplicate (BFI0418-DUP1)

Source: 2209173-01

Prepared: 09/16/22 Analyzed: 09/19/22

Specific Conductance (EC) 0.471 0.0100 mmhos/cm 0.470 0.128 20

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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 BFI0417 - General Preparation

LCS (BFI0417-BS1)

Prepared: 09/16/22 Analyzed: 09/19/22

pH	9.08	pH Units	9.18	98.9	95-105
----	------	----------	------	------	--------

Duplicate (BFI0417-DUP1)

Source: 2209173-01

Prepared: 09/16/22 Analyzed: 09/19/22

pH	7.44	pH Units	7.65	2.78	20
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Tasman Geosciences
6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
09/20/22 14:20

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.
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.
D-09	Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

October 13, 2022

Jacob Whritenour
Tasman Geosciences
6855 W. 119th Ave.
Broomfield, CO 80020
RE: Noble - Lilli Unit 6-9
Work Order #2209575

Enclosed are the results of analyses for samples received by Summit Scientific on 09/29/22 16:00. 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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS02@2'	2209575-01	Soil	09/29/22 12:00	09/29/22 16:00
SS03@2'	2209575-02	Soil	09/29/22 12:05	09/29/22 16:00
SS04@2'	2209575-03	Soil	09/29/22 12:10	09/29/22 16:00
SS05@2'	2209575-04	Soil	09/29/22 12:15	09/29/22 16:00
SS06@2'	2209575-05	Soil	09/29/22 12:20	09/29/22 16:00
SS07@2'	2209575-06	Soil	09/29/22 12:25	09/29/22 16:00
SS08@2'	2209575-07	Soil	09/29/22 12:30	09/29/22 16:00
SS09@2'	2209575-08	Soil	09/29/22 12:35	09/29/22 16:00
FS01@3'	2209575-09	Soil	09/29/22 12:40	09/29/22 16:00
FS02@3'	2209575-10	Soil	09/29/22 12:45	09/29/22 16:00

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.

2209575

Summit Scientific

S₂

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

Page 1 of 1

Client: Noble / Tasman

Project Manager:

Jake Whritenour

Invoice:

Erica Zuniga

Address: 6855 W. 119th Ave

E-Mail:

jwhritenour@tasman-geo.com

City/State/Zip: Broomfield, CO 80020

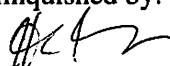
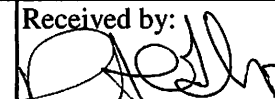
Phone: 303-827-1511

Project Name: Lilli Unit 6-9

Sampler Name: Hunter Merlo

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	VOC - 915	TPH - 915	PAH - 915	pH, EC, SAR	Boron - HWS	HOLD	Metals - 915	
1	SS02@2'	9/29/22	1200	3			X			X			X	X	X	X	X		X	pH, EC, SAR by saturated paste
2	SS03@2'		1205																	
3	SS04@2'		1210																	
4	SS05@2'		1215																	
5	SS06@2'		1220																	
6	SS07@2'		1225																	
7	SS08@2'		1230																	
8	SS09@2'		1235																	
9	FS01@3'		1240																	
10	FS02@3'	✓	1245	✓			✓			✓			✓	✓	✓	✓	✓	✓	✓	

Relinquished by: 	Date/Time: 9/29/22 1530	Received by: Tasman's Lock Box - Summit	Date/Time: 9/29/22 1530	Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/> 24 hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 hours <input type="checkbox"/>	Notes:
Relinquished by: Tasman's Lock Box - Summit	Date/Time: 9/29/22 1600	Received by: 	Date/Time: 9/29/22 1600	Sample Integrity: Temperature Upon Receipt: 9.3 Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order#

2209575

Client: Noble/TasmanClient Project ID: Lilli Unit 7 Co.9Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

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

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

9.3

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on Ice
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Same day
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
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.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Custodian Printed Name

Date/Time

8.29.22

19:50



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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS02@2'
2209575-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0451	113 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0428	107 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	9.93	79.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS02@2'
2209575-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0221	66.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0180	53.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.187	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:00**

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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS02@2'
2209575-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.24	0.264	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	162	0.529	"	"	"	"	"	"
Cadmium	0.320	0.264	"	"	"	"	"	"
Copper	9.33	0.529	"	"	"	"	"	"
Lead	16.9	0.264	"	"	"	"	"	"
Nickel	5.43	0.529	"	"	"	"	"	"
Selenium	1.11	0.344	"	"	"	"	"	"
Silver	0.0513	0.0264	"	"	"	"	"	"
Zinc	26.9	0.529	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	64.4	0.0661	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	12.8	0.0661	"	"	"	"	"	"	
Sodium	18.1	0.0661	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.539	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:00**

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 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS02@2'
2209575-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	75.7	%	1	BFJ0091	10/05/22	10/06/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.512	0.0100	mmhos/cm	1	BF10815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.71		pH Units	1	BF10814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS03@2'
2209575-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0407	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0374	93.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0380	95.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.6	84.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS03@2'
2209575-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0254	76.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0227	68.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0961	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:05**

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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS03@2'
2209575-02 (Soil)

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Total Metals by EPA 6020B

Arsenic	1.71	0.217	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	61.5	0.435	"	"	"	"	"	"
Cadmium	ND	0.217	"	"	"	"	"	"
Copper	3.26	0.435	"	"	"	"	"	"
Lead	4.98	0.217	"	"	"	"	"	"
Nickel	1.89	0.435	"	"	"	"	"	"
Selenium	0.496	0.282	"	"	"	"	"	"
Silver	ND	0.0217	"	"	"	"	"	"
Zinc	8.28	0.435	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	44.4	0.0543	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	9.48	0.0543	"	"	"	"	"	"	
Sodium	25.7	0.0543	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.913	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS03@2'
2209575-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	92.1			%	1	BFJ0091	10/05/22	10/06/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.499	0.0100		mmhos/cm	1	BFI0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:05**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.83			pH Units	1	BFI0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS04@2'
2209575-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0425	106 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	92.9 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0391	97.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.3	82.7 %	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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS04@2'
2209575-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0208	62.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0189	56.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.101	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:10**

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS04@2'
2209575-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.82	0.216	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	33.8	0.432	"	"	"	"	"	"
Cadmium	ND	0.216	"	"	"	"	"	"
Copper	2.05	0.432	"	"	"	"	"	"
Lead	4.45	0.216	"	"	"	"	"	"
Nickel	1.38	0.432	"	"	"	"	"	"
Selenium	0.368	0.281	"	"	"	"	"	"
Silver	ND	0.0216	"	"	"	"	"	"
Zinc	5.13	0.432	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	18.3	0.0540	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	2.44	0.0540	"	"	"	"	"	"	
Sodium	6.87	0.0540	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.400	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS04@2'
2209575-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.6		%	1	BFJ0091	10/05/22	10/06/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.175	0.0100	mmhos/cm	1	BFI0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.63		pH Units	1	BFI0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS05@2'
2209575-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0451	113 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	93.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.7 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.49	67.9 %	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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS05@2'
2209575-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0223	67.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0216	64.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0762	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:15**

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS05@2'
2209575-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.50	0.212	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	27.5	0.423	"	"	"	"	"	"
Cadmium	ND	0.212	"	"	"	"	"	"
Copper	1.81	0.423	"	"	"	"	"	"
Lead	3.50	0.212	"	"	"	"	"	"
Nickel	1.02	0.423	"	"	"	"	"	"
Selenium	ND	0.275	"	"	"	"	"	"
Silver	ND	0.0212	"	"	"	"	"	"
Zinc	4.32	0.423	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	14.7	0.0529	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	3.39	0.0529	"	"	"	"	"	"	
Sodium	20.5	0.0529	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.25	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS05@2'
2209575-04 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.5		%	1	BFJ0091	10/05/22	10/06/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.212	0.0100	mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:15**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.10		pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS06@2'
2209575-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0447	112 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0374	93.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0387	96.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.1	96.7 %	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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS06@2'
2209575-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0199	59.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.236	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:20**

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS06@2'
2209575-05 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.64	0.273	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	119	0.546	"	"	"	"	"	"
Cadmium	ND	0.273	"	"	"	"	"	"
Copper	8.40	0.546	"	"	"	"	"	"
Lead	12.6	0.273	"	"	"	"	"	"
Nickel	4.52	0.546	"	"	"	"	"	"
Selenium	0.973	0.355	"	"	"	"	"	"
Silver	0.0336	0.0273	"	"	"	"	"	"
Zinc	25.0	0.546	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	37.8	0.0682	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	7.41	0.0682	"	"	"	"	"	"	
Sodium	98.1	0.0682	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.82	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:20**

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS06@2'
2209575-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	73.3	%	1	BFJ0091	10/05/22	10/06/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.594	0.0100	mmhos/cm	1	BFI0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.83		pH Units	1	BFI0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS07@2'
2209575-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0483	121 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0376	94.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.0	96.1 %	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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS07@2'
2209575-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0179	53.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0162	48.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.105	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:25**

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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS07@2'
2209575-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.18	0.230	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	37.6	0.460	"	"	"	"	"	"
Cadmium	ND	0.230	"	"	"	"	"	"
Copper	3.09	0.460	"	"	"	"	"	"
Lead	4.28	0.230	"	"	"	"	"	"
Nickel	1.58	0.460	"	"	"	"	"	"
Selenium	0.591	0.299	"	"	"	"	"	"
Silver	ND	0.0230	"	"	"	"	"	"
Zinc	5.91	0.460	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	13.7	0.0576	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	3.14	0.0576	"	"	"	"	"	"	
Sodium	64.0	0.0576	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.06	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS07@2'
2209575-06 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.9			%	1	BFJ0091	10/05/22	10/06/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.365	0.0100		mmhos/cm	1	BFI0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.14			pH Units	1	BFI0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS08@2'
2209575-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.0 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0346	86.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0355	88.6 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	7.96	63.7 %	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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS08@2'
2209575-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0236	70.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0859	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:30**

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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS08@2'
2209575-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	3.36	0.232	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	126	0.464	"	"	"	"	"	"
Cadmium	ND	0.232	"	"	"	"	"	"
Copper	6.13	0.464	"	"	"	"	"	"
Lead	9.18	0.232	"	"	"	"	"	"
Nickel	3.90	0.464	"	"	"	"	"	"
Selenium	0.630	0.302	"	"	"	"	"	"
Silver	ND	0.0232	"	"	"	"	"	"
Zinc	14.9	0.464	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	65.1	0.0581	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	13.2	0.0581	"	"	"	"	"	"	
Sodium	206	0.0581	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.09	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS08@2'
2209575-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	86.1			%	1	BFJ0091	10/05/22	10/06/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	1.41	0.0100		mmhos/cm	1	BFI0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.98			pH Units	1	BFI0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS09@2'
2209575-08 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0371	92.7 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0348	87.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0362	90.4 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.53	68.2 %	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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS09@2'
2209575-08 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0273	81.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0260	77.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0491	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:35**

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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS09@2'
2209575-08 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.73	0.211	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	53.1	0.423	"	"	"	"	"	"
Cadmium	ND	0.211	"	"	"	"	"	"
Copper	2.33	0.423	"	"	"	"	"	"
Lead	4.22	0.211	"	"	"	"	"	"
Nickel	1.44	0.423	"	"	"	"	"	"
Selenium	0.281	0.275	"	"	"	"	"	"
Silver	ND	0.0211	"	"	"	"	"	"
Zinc	6.03	0.423	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	11.3	0.0528	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	2.39	0.0528	"	"	"	"	"	"	
Sodium	29.5	0.0528	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.08	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

SS09@2'
2209575-08 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	94.6			%	1	BFJ0091	10/05/22	10/06/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.216	0.0100		mmhos/cm	1	BFJ0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.11			pH Units	1	BFJ0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS01@3'
2209575-09 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0350	87.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0364	91.0 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	8.74	69.9 %	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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS01@3'
2209575-09 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0222	66.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0200	60.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0589	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:40**

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 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS01@3'
2209575-09 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	1.49	0.226	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	21.3	0.452	"	"	"	"	"	"
Cadmium	0.240	0.226	"	"	"	"	"	"
Copper	2.74	0.452	"	"	"	"	"	"
Lead	4.79	0.226	"	"	"	"	"	"
Nickel	1.38	0.452	"	"	"	"	"	"
Selenium	0.340	0.294	"	"	"	"	"	"
Silver	ND	0.0226	"	"	"	"	"	"
Zinc	6.33	0.452	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.4	0.0565	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	4.88	0.0565	"	"	"	"	"	"	
Sodium	19.7	0.0565	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.02	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:40**

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 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS01@3'
2209575-09 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	88.5	%	1	BFJ0091	10/05/22	10/06/22	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.252	0.0100	mmhos/cm	1	BFI0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:40**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.93		pH Units	1	BFI0814	09/30/22	10/03/22	EPA 9045D	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS02@3'
2209575-10 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BF10780	09/29/22	09/29/22	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: **09/29/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0356	89.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0369	92.2 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BF10781	09/29/22	09/29/22	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	9.15	73.2 %	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 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS02@3'
2209575-10 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BF10782	09/30/22	10/01/22	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: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0231	69.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0218	65.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0488	0.0100	mg/L	1	BFJ0125	10/06/22	10/08/22	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **09/29/22 12:45**

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS02@3'
2209575-10 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Arsenic	2.37	0.236	mg/kg dry	1	BFJ0084	10/05/22	10/07/22	EPA 6020B
Barium	74.5	0.471	"	"	"	"	"	"
Cadmium	ND	0.236	"	"	"	"	"	"
Copper	4.44	0.471	"	"	"	"	"	"
Lead	6.57	0.236	"	"	"	"	"	"
Nickel	2.40	0.471	"	"	"	"	"	"
Selenium	0.392	0.306	"	"	"	"	"	"
Silver	ND	0.0236	"	"	"	"	"	"
Zinc	9.98	0.471	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BFJ0253	10/11/22	10/12/22	EPA 7196A	

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

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	20.2	0.0589	mg/L dry	1	BFJ0813	09/30/22	10/05/22	EPA 6020B	
Magnesium	5.96	0.0589	"	"	"	"	"	"	
Sodium	12.4	0.0589	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.623	0.00100	units	1	BFJ0139	10/06/22	10/06/22	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

FS02@3'
2209575-10 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.9		%	1	BFJ0091	10/05/22	10/06/22	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.196	0.0100	mmhos/cm	1	BFI0815	09/30/22	10/03/22	EPA 120.1	

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

Date Sampled: **09/29/22 12:45**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.04		pH Units	1	BFI0814	09/30/22	10/03/22	EPA 9045D	

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Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BF10780 - EPA 5030 Soil MS

Blank (BF10780-BLK1)

Prepared & Analyzed: 09/29/22

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	0.0449		"	0.0400		112	50-150			
Surrogate: Toluene-d8	0.0374		"	0.0400		93.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0399		"	0.0400		99.8	50-150			

LCS (BF10780-BS1)

Prepared & Analyzed: 09/29/22

Benzene	0.0559	0.0020	mg/kg	0.0750		74.5	70-130			
Toluene	0.0610	0.0050	"	0.0750		81.4	70-130			
Ethylbenzene	0.0601	0.0050	"	0.0750		80.1	70-130			
m,p-Xylene	0.119	0.010	"	0.150		79.5	70-130			
o-Xylene	0.0614	0.0050	"	0.0750		81.8	70-130			
1,2,4-Trimethylbenzene	0.0577	0.0050	"	0.0750		76.9	70-130			
1,3,5-Trimethylbenzene	0.0578	0.0050	"	0.0750		77.0	70-130			
Naphthalene	0.0620	0.0038	"	0.0750		82.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0354		"	0.0400		88.6	50-150			
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0361		"	0.0400		90.2	50-150			

Matrix Spike (BF10780-MS1)

Source: 2209575-01

Prepared & Analyzed: 09/29/22

Benzene	0.0544	0.0020	mg/kg	0.0750	ND	72.6	70-130			
Toluene	0.0600	0.0050	"	0.0750	ND	80.0	70-130			
Ethylbenzene	0.0537	0.0050	"	0.0750	ND	71.6	70-130			
m,p-Xylene	0.109	0.010	"	0.150	ND	72.6	70-130			
o-Xylene	0.0577	0.0050	"	0.0750	ND	76.9	70-130			
1,2,4-Trimethylbenzene	0.0552	0.0050	"	0.0750	ND	73.6	70-130			
1,3,5-Trimethylbenzene	0.0548	0.0050	"	0.0750	ND	73.1	70-130			
Naphthalene	0.0538	0.0038	"	0.0750	ND	71.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0386		"	0.0400		96.4	50-150			
Surrogate: Toluene-d8	0.0387		"	0.0400		96.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0368		"	0.0400		92.0	50-150			

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BFI0780 - EPA 5030 Soil MS

Matrix Spike Dup (BFI0780-MSD1)		Source: 2209575-01			Prepared & Analyzed: 09/29/22					
Benzene	0.0538	0.0020	mg/kg	0.0750	ND	71.8	70-130	1.16	30	
Toluene	0.0566	0.0050	"	0.0750	ND	75.5	70-130	5.81	30	
Ethylbenzene	0.0527	0.0050	"	0.0750	ND	70.2	70-130	1.86	30	
m,p-Xylene	0.105	0.010	"	0.150	ND	70.2	70-130	3.44	30	
o-Xylene	0.0566	0.0050	"	0.0750	ND	75.5	70-130	1.84	30	
1,2,4-Trimethylbenzene	0.0547	0.0050	"	0.0750	ND	72.9	70-130	1.04	30	
1,3,5-Trimethylbenzene	0.0532	0.0050	"	0.0750	ND	70.9	70-130	3.05	30	
Naphthalene	0.0584	0.0038	"	0.0750	ND	77.8	70-130	8.02	30	
Surrogate: 1,2-Dichloroethane-d4		0.0382	"	0.0400		95.4	50-150			
Surrogate: Toluene-d8		0.0387	"	0.0400		96.8	50-150			
Surrogate: 4-Bromofluorobenzene		0.0368	"	0.0400		92.1	50-150			

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Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFI0781 - EPA 3550A

Blank (BFI0781-BLK1)

Prepared: 09/29/22 Analyzed: 09/30/22

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

LCS (BFI0781-BS1)

Prepared: 09/29/22 Analyzed: 09/30/22

C10-C28 (DRO)	557	50	mg/kg	500	111	70-130
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Matrix Spike (BFI0781-MS1)

Source: 2209575-01

Prepared: 09/29/22 Analyzed: 09/30/22

C10-C28 (DRO)	508	50	mg/kg	500	14.7	98.6	70-130
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Matrix Spike Dup (BFI0781-MSD1)

Source: 2209575-01

Prepared: 09/29/22 Analyzed: 09/30/22

C10-C28 (DRO)	477	50	mg/kg	500	14.7	92.5	70-130	6.21	20
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Project: Noble - Lilli Unit 6-9
Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFI0782 - EPA 5030 Soil MS

Blank (BFI0782-BLK1)

Prepared & Analyzed: 09/30/22

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	0.0285		"	0.0333		85.5	40-150			
Surrogate: Fluoranthene-d10	0.0321		"	0.0333		96.2	40-150			

LCS (BFI0782-BS1)

Prepared & Analyzed: 09/30/22

Acenaphthene	0.0309	0.00500	mg/kg	0.0333		92.8	31-137			
Anthracene	0.0308	0.00500	"	0.0333		92.5	30-120			
Benzo (a) anthracene	0.0313	0.00500	"	0.0333		93.9	30-120			
Benzo (a) pyrene	0.0306	0.00500	"	0.0333		91.9	30-120			
Benzo (b) fluoranthene	0.0309	0.00500	"	0.0333		92.8	30-120			
Benzo (k) fluoranthene	0.0313	0.00500	"	0.0333		94.0	30-120			
Chrysene	0.0312	0.00500	"	0.0333		93.7	30-120			
Dibenz (a,h) anthracene	0.0280	0.00500	"	0.0333		84.1	30-120			
Fluoranthene	0.0276	0.00500	"	0.0333		82.9	30-120			
Fluorene	0.0311	0.00500	"	0.0333		93.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0275	0.00500	"	0.0333		82.5	30-120			
Pyrene	0.0232	0.00500	"	0.0333		69.5	35-142			
1-Methylnaphthalene	0.0272	0.00500	"	0.0333		81.5	35-142			
2-Methylnaphthalene	0.0319	0.00500	"	0.0333		95.6	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0242		"	0.0333		72.6	40-150			
Surrogate: Fluoranthene-d10	0.0330		"	0.0333		99.0	40-150			

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BFI0782 - EPA 5030 Soil MS

Matrix Spike (BFI0782-MS1)			Source: 2209566-02		Prepared & Analyzed: 09/30/22						
Acenaphthene	0.0208	0.00500	mg/kg	0.0333	ND	62.5	31-137				
Anthracene	0.0197	0.00500	"	0.0333	ND	59.1	30-120				
Benzo (a) anthracene	0.0226	0.00500	"	0.0333	ND	67.9	30-120				
Benzo (a) pyrene	0.0235	0.00500	"	0.0333	ND	70.6	30-120				
Benzo (b) fluoranthene	0.0241	0.00500	"	0.0333	ND	72.4	30-120				
Benzo (k) fluoranthene	0.0216	0.00500	"	0.0333	ND	64.7	30-120				
Chrysene	0.0233	0.00500	"	0.0333	ND	70.0	30-120				
Dibenz (a,h) anthracene	0.0174	0.00500	"	0.0333	ND	52.1	30-120				
Fluoranthene	0.0184	0.00500	"	0.0333	ND	55.1	30-120				
Fluorene	0.0203	0.00500	"	0.0333	ND	60.8	30-120				
Indeno (1,2,3-cd) pyrene	0.0151	0.00500	"	0.0333	ND	45.2	30-120				
Pyrene	0.0161	0.00500	"	0.0333	ND	48.3	35-142				
1-Methylnaphthalene	0.0185	0.00500	"	0.0333	0.00198	49.6	15-130				
2-Methylnaphthalene	0.0227	0.00500	"	0.0333	ND	68.1	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0205		"	0.0333		61.6	40-150				
Surrogate: Fluoranthene-d10	0.0208		"	0.0333		62.4	40-150				

Matrix Spike Dup (BFI0782-MSD1)			Source: 2209566-02		Prepared & Analyzed: 09/30/22						
Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.0	31-137	16.5	30		
Anthracene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	15.0	30		
Benzo (a) anthracene	0.0175	0.00500	"	0.0333	ND	52.5	30-120	25.6	30		
Benzo (a) pyrene	0.0169	0.00500	"	0.0333	ND	50.6	30-120	32.9	30		QR-02
Benzo (b) fluoranthene	0.0170	0.00500	"	0.0333	ND	50.9	30-120	35.0	30		QR-02
Benzo (k) fluoranthene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	23.2	30		
Chrysene	0.0175	0.00500	"	0.0333	ND	52.6	30-120	28.3	30		
Dibenz (a,h) anthracene	0.0147	0.00500	"	0.0333	ND	44.2	30-120	16.4	30		
Fluoranthene	0.0148	0.00500	"	0.0333	ND	44.5	30-120	21.4	30		
Fluorene	0.0171	0.00500	"	0.0333	ND	51.3	30-120	16.8	30		
Indeno (1,2,3-cd) pyrene	0.0173	0.00500	"	0.0333	ND	52.0	30-120	13.9	30		
Pyrene	0.0185	0.00500	"	0.0333	ND	55.6	35-142	14.1	30		
1-Methylnaphthalene	0.0177	0.00500	"	0.0333	0.00198	47.2	15-130	4.27	50		
2-Methylnaphthalene	0.0186	0.00500	"	0.0333	ND	55.7	15-130	20.0	50		
Surrogate: 2-Methylnaphthalene-d10	0.0177		"	0.0333		53.2	40-150				
Surrogate: Fluoranthene-d10	0.0175		"	0.0333		52.6	40-150				

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
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Analyte	Reporting			Spike	Source		%REC		RPD	
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BFJ0125 - EPA 3050B

Blank (BFJ0125-BLK1)

Prepared: 10/06/22 Analyzed: 10/08/22

Boron ND 0.0100 mg/L

LCS (BFJ0125-BS1)

Prepared: 10/06/22 Analyzed: 10/08/22

Boron 4.61 0.0100 mg/L 5.00 92.3 80-120

Duplicate (BFJ0125-DUP1)

Source: 2209261-03

Prepared: 10/06/22 Analyzed: 10/08/22

Boron 0.0438 0.0100 mg/L 0.0510 15.3 20

Matrix Spike (BFJ0125-MS1)

Source: 2209261-03

Prepared: 10/06/22 Analyzed: 10/08/22

Boron 4.57 0.0100 mg/L 5.00 0.0510 90.5 75-125

Matrix Spike Dup (BFJ0125-MSD1)

Source: 2209261-03

Prepared: 10/06/22 Analyzed: 10/08/22

Boron 4.18 0.0100 mg/L 5.00 0.0510 82.5 75-125 9.08 25

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Project: Noble - Lilli Unit 6-9
Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BFJ0084 - EPA 3050B

Blank (BFJ0084-BLK1)

Prepared: 10/05/22 Analyzed: 10/07/22

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 (BFJ0084-BS1)

Prepared: 10/05/22 Analyzed: 10/07/22

Arsenic	41.8	0.200	mg/kg wet	40.0	105	80-120
Barium	44.6	0.400	"	40.0	111	80-120
Cadmium	2.18	0.200	"	2.00	109	80-120
Copper	45.6	0.400	"	40.0	114	80-120
Lead	20.9	0.200	"	20.0	105	80-120
Nickel	45.4	0.400	"	40.0	113	80-120
Selenium	4.62	0.260	"	4.00	115	80-120
Silver	2.30	0.0200	"	2.00	115	80-120
Zinc	45.3	0.400	"	40.0	113	80-120

Duplicate (BFJ0084-DUP1)

Source: 2209575-01

Prepared: 10/05/22 Analyzed: 10/07/22

Arsenic	3.52	0.264	mg/kg dry	3.24	8.44	20
Barium	156	0.529	"	162	3.69	20
Cadmium	0.308	0.264	"	0.320	3.81	20
Copper	9.70	0.529	"	9.33	3.91	20
Lead	16.2	0.264	"	16.9	4.41	20
Nickel	5.85	0.529	"	5.43	7.53	20
Selenium	1.11	0.344	"	1.11	0.482	20
Silver	0.0507	0.0264	"	0.0513	1.25	20
Zinc	28.0	0.529	"	26.9	3.93	20

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFJ0084 - EPA 3050B

Matrix Spike (BFJ0084-MS1)		Source: 2209575-01			Prepared: 10/05/22 Analyzed: 10/07/22					
Arsenic	65.0	0.264	mg/kg dry	52.9	3.24	117	75-125			
Barium	186	0.529	"	52.9	162	45.1	75-125			QM-02
Cadmium	3.38	0.264	"	2.64	0.320	116	75-125			
Copper	67.4	0.529	"	52.9	9.33	110	75-125			
Lead	39.8	0.264	"	26.4	16.9	86.7	75-125			
Nickel	65.1	0.529	"	52.9	5.43	113	75-125			
Selenium	6.84	0.344	"	5.29	1.11	109	75-125			
Silver	2.93	0.0264	"	2.64	0.0513	109	75-125			
Zinc	90.2	0.529	"	52.9	26.9	120	75-125			

Matrix Spike Dup (BFJ0084-MSD1)		Source: 2209575-01			Prepared: 10/05/22 Analyzed: 10/07/22					
Arsenic	64.1	0.264	mg/kg dry	52.9	3.24	115	75-125	1.35	25	
Barium	194	0.529	"	52.9	162	61.7	75-125	4.61	25	QM-02
Cadmium	3.55	0.264	"	2.64	0.320	122	75-125	4.79	25	
Copper	66.8	0.529	"	52.9	9.33	109	75-125	0.804	25	
Lead	42.0	0.264	"	26.4	16.9	94.9	75-125	5.35	25	
Nickel	64.2	0.529	"	52.9	5.43	111	75-125	1.45	25	
Selenium	6.71	0.344	"	5.29	1.11	106	75-125	2.02	25	
Silver	3.03	0.0264	"	2.64	0.0513	113	75-125	3.62	25	
Zinc	89.2	0.529	"	52.9	26.9	118	75-125	1.11	25	

Summit Scientific

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

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFJ0253 - 3060A Mod

Blank (BFJ0253-BLK1)

Prepared: 10/11/22 Analyzed: 10/12/22

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BFJ0253-BS1)

Prepared: 10/11/22 Analyzed: 10/12/22

Chromium, Hexavalent 22.5 0.30 mg/kg wet 25.0 90.0 80-120

Duplicate (BFJ0253-DUP1)

Source: 2209570-01

Prepared: 10/11/22 Analyzed: 10/12/22

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BFJ0253-MS1)

Source: 2209570-01

Prepared: 10/11/22 Analyzed: 10/12/22

Chromium, Hexavalent 28.2 0.30 mg/kg dry 28.6 ND 98.8 75-125

Matrix Spike Dup (BFJ0253-MSD1)

Source: 2209570-01

Prepared: 10/11/22 Analyzed: 10/12/22

Chromium, Hexavalent 37.1 0.30 mg/kg dry 28.6 ND 130 75-125 27.1 20 QM-05

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Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFI0813 - General Preparation

Blank (BFI0813-BLK1)

Prepared: 09/30/22 Analyzed: 10/05/22

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

LCS (BFI0813-BS1)

Prepared: 09/30/22 Analyzed: 10/05/22

Calcium	6.24	0.0500	mg/L wet	5.00	125	70-130
Magnesium	6.52	0.0500	"	5.00	130	70-130
Sodium	6.31	0.0500	"	5.00	126	70-130

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Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFJ0091 - General Preparation

Duplicate (BFJ0091-DUP1)

Source: 2209562-01

Prepared: 10/05/22 Analyzed: 10/06/22

% Solids	90.5	%	90.6	0.158	20
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Summit Scientific

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Tasman Geosciences
6855 W. 119th Ave.
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Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFI0815 - General Preparation

Blank (BFI0815-BLK1)

Prepared: 09/30/22 Analyzed: 10/03/22

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BFI0815-BS1)

Prepared: 09/30/22 Analyzed: 10/03/22

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BFI0815-DUP1)

Source: 2209520-04

Prepared: 09/30/22 Analyzed: 10/03/22

Specific Conductance (EC) 2.08 0.0100 mmhos/cm 2.08 0.00 20

Summit Scientific

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6855 W. 119th Ave.
Broomfield CO, 80020

Project: Noble - Lilli Unit 6-9

Project Number: [none]

Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

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 BFI0814 - General Preparation

LCS (BFI0814-BS1)

Prepared: 09/30/22 Analyzed: 10/03/22

pH	9.14	pH Units	9.18	99.6	95-105
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Duplicate (BFI0814-DUP1)

Source: 2209520-04

Prepared: 09/30/22 Analyzed: 10/03/22

pH	7.65	pH Units	7.65	0.00	20
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Summit Scientific

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6855 W. 119th Ave.
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Project: Noble - Lilli Unit 6-9

Project Number: [none]
Project Manager: Jacob Whritenour

Reported:
10/13/22 09:43

Notes and Definitions

QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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.
QM-02	The RPD and/or percent recovery for this QC sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference