

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

June 12, 2023

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Loustalet 64N64W 30

Work Order # 2305374

Enclosed are the results of analyses for samples received by Summit Scientific on 05/16/23 14:56. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@4.0'	2305374-01	Soil	05/15/23 00:00	05/16/23 14:56
SEP01@5.5'	2305374-02	Soil	05/15/23 00:00	05/16/23 14:56
SEP02@5.5'	2305374-03	Soil	05/15/23 00:00	05/16/23 14:56
PWVB01@7.0'	2305374-04	Soil	05/15/23 00:00	05/16/23 14:56
PWVN01@6.0'	2305374-05	Soil	05/15/23 00:00	05/16/23 14:56
PWVS01@6.0'	2305374-06	Soil	05/15/23 00:00	05/16/23 14:56
PWVE01@6.0'	2305374-07	Soil	05/15/23 00:00	05/16/23 14:56
PWVW01@6.0'	2305374-08	Soil	05/15/23 00:00	05/16/23 14:56
BKG01@6.0"	2305374-09	Soil	05/15/23 00:00	05/16/23 14:56

### Case Narrative

Ethan Black requested Metals be added to PWVW01@6.0' & AST01@4.0' on 5/31/2023. This report includes those results.

# SUMMIT SCIENTIFIC

4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

Lab ID	Page 1 of 1
2305374	

Client: <u>Fremont Env</u>		Send Data To:		Send Invoice To:	
Address:		Project Manager: <u>Paul Henahan</u>		Company: <u>Noble</u>	
City/State/Zip:		E-Mail: <u>Paulh@fremontenv.com</u>		Project Name/Location:	
Phone:		<u>Jeffg@fremontenv.com</u> <u>Ethanb@fremontenv.com</u>		AFE#:	
Sampler Name: <u>JG</u>		Project Name: <u>Loustalet-64N64W 30</u>		PO/Billing Codes:	
		Project Number:		Contact:	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX+N	TMBs(915)	DRO,ORO,GRO	PAHs(915)	EC,PM, SAR, Baran	Metals(915)	
1	AST01@4.0'	5/15/23		2			X			X			X	X	X	X	X		
2	SEP01@5.5'																		
3	SEP02@5.5'																		
4	PWV01@7.0'																		
5	PWV01@6.0'																		
6	PWV01@6.0'																		
7	PWV01@6.0'																		
8	PWV01@6.0'			2									X	X	X	X			
9	BKG01@6.0"			2													X	X	
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <u>[Signature]</u>	Date/Time: <u>5/16/23 1455</u>	Received by: <u>[Signature]</u>	Date/Time: <u>5/16/23/455</u>	TAT Business Days	Field DO	Notes:  <u>Bill to Noble</u>
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	X Field Turb.	
Temperature Upon Receipt: <u>19.8</u>	Corrected Temperature: <u>—</u>	IR gun #: <u>02</u>	HNO3 lot #:			

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2305374Client: Fremont Environmental Client Project ID: Laushtet - 64N64W30Shipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: \_\_\_\_\_

<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

19.8

Thermometer #

02

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? <sup>(1)</sup>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):				

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

5/16/23 1456  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**AST01@4.0'**  
**2305374-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Benzene</b>	<b>0.052</b>	0.020		mg/kg	10	BGE0618	05/17/23	05/18/23	EPA 8260B	
<b>Toluene</b>	<b>0.63</b>	0.050		"	"	"	"	"	"	
Ethylbenzene	ND	0.050		"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>6.7</b>	0.10		"	"	"	"	"	"	
<b>1,2,4-Trimethylbenzene</b>	<b>2.8</b>	0.050		"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>1.9</b>	0.050		"	"	"	"	"	"	
<b>Naphthalene</b>	<b>0.14</b>	0.038		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>130</b>	5.0		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		117 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		92.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		131 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>C10-C28 (DRO)</b>	<b>95</b>	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		115 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**AST01@4.0'**  
**2305374-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0633	05/18/23	05/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.00980</b>	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		"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0322</b>	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.415</b>	0.100		"	20	"	"	05/19/23	"	
<b>2-Methylnaphthalene</b>	<b>0.889</b>	0.100		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		100 %		40-150		"	"	05/18/23	"	
Surrogate: Fluoranthene-d10		82.6 %		40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.216</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
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Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**AST01@4.0'**  
**2305374-01 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Arsenic	0.483	0.214	mg/kg dry	1	BGF0155	06/05/23	06/07/23	EPA 6020B
Barium	31.7	0.429	"	"	"	"	"	"
Cadmium	ND	0.214	"	"	"	"	"	"
Copper	1.25	0.429	"	"	"	"	"	"
Lead	2.73	0.214	"	"	"	"	"	"
Nickel	1.05	0.429	"	"	"	"	"	"
Selenium	ND	0.279	0.188	"	"	"	"	"
Silver	ND	0.0214	"	"	"	"	"	"
Zinc	4.14	0.429	"	"	"	"	"	"

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGF0260	06/07/23	06/08/23	EPA 7196A	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	147	0.0536		mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B	
Magnesium	35.5	0.0536		"	"	"	"	"	"	
Sodium	95.4	0.0536		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.83	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Summit Scientific

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**AST01@4.0'**  
**2305374-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	93.3			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.705	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	6.51			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**SEP01@5.5'**  
**2305374-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0618	05/17/23	05/18/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		112 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		103 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		114 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		125 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**SEP01@5.5'**  
**2305374-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0633	05/18/23	05/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		64.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		54.4 %		40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.162</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**SEP01@5.5'**  
**2305374-02 (Soil)**

**Summit Scientific**

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

Calcium	105	0.0541	mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B
Magnesium	24.3	0.0541	"	"	"	"	"	"
Sodium	3.83	0.0541	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0876	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.151	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.33			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**SEP02@5.5'**  
**2305374-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0618	05/17/23	05/18/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		115 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		110 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**SEP02@5.5'**  
**2305374-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0633	05/18/23	05/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		99.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.8 %		40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.181</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**SEP02@5.5'**  
**2305374-03 (Soil)**

**Summit Scientific**

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

Calcium	66.7	0.0537	mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B
Magnesium	15.3	0.0537	"	"	"	"	"	"
Sodium	4.78	0.0537	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.138	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.0			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.187	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.47			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVB01@7.0'**  
**2305374-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0618	05/17/23	05/18/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		118 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		102 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		112 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

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

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVB01@7.0'**  
**2305374-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit									
Acenaphthene	ND	0.00500			mg/kg	1	BGE0633	05/18/23	05/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500			"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500			"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500			"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500			"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500			"	"	"	"	"	"	
Chrysene	ND	0.00500			"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500			"	"	"	"	"	"	
Fluoranthene	ND	0.00500			"	"	"	"	"	"	
Fluorene	ND	0.00500			"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500			"	"	"	"	"	"	
Pyrene	ND	0.00500			"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500			"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500			"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit									
Surrogate: 2-Methylnaphthalene-d10		63.7 %			40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		62.9 %			40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit									
<b>Boron</b>	<b>0.197</b>	0.0100			mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

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

Date Sampled: **05/15/23 00:00**

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVB01@7.0'**  
**2305374-04 (Soil)**

**Summit Scientific**

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

Calcium	216	0.0555	mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B
Magnesium	45.9	0.0555	"	"	"	"	"	"
Sodium	5.16	0.0555	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0832	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.0			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.210	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.00			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVN01@6.0'**  
**2305374-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGE0618	05/17/23	05/18/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.14</b>	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>3.8</b>	0.50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		114 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		105 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		119 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		90.4 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVN01@6.0'**  
**2305374-05 (Soil)**

### Summit Scientific

#### PAH by EPA Method 8270D SIM

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0633	05/18/23	05/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		70.3 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		85.0 %		40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.160</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVN01@6.0'**  
**2305374-05 (Soil)**

### Summit Scientific

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

Calcium	247	0.0545	mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B
Magnesium	59.7	0.0545	"	"	"	"	"	"
Sodium	20.4	0.0545	"	"	"	"	"	"

#### Calculated Analysis

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.302	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.8			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.217	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.55			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVS01@6.0'**  
**2305374-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0618	05/17/23	05/18/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		115 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		108 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		111 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		95.0 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVS01@6.0'**  
**2305374-06 (Soil)**

### Summit Scientific

#### PAH by EPA Method 8270D SIM

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0633	05/18/23	05/18/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		54.0 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.9 %		40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.132</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVS01@6.0'**  
**2305374-06 (Soil)**

**Summit Scientific**

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

Calcium	191	0.0590	mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B
Magnesium	42.0	0.0590	"	"	"	"	"	"
Sodium	49.7	0.0590	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.848	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.8			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.186	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.24			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVE01@6.0'**  
**2305374-07 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGE0618	05/17/23	05/18/23	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		110 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		96.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		95.8 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVE01@6.0'**  
**2305374-07 (Soil)**

### Summit Scientific

#### PAH by EPA Method 8270D SIM

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0633	05/18/23	05/19/23	EPA 8270D SIM	
Anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500		"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500		"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500		"	"	"	"	"	"	
Chrysene	ND	0.00500		"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500		"	"	"	"	"	"	
Fluoranthene	ND	0.00500		"	"	"	"	"	"	
Fluorene	ND	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
Pyrene	ND	0.00500		"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		79.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		81.2 %		40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0904</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVE01@6.0'**  
**2305374-07 (Soil)**

**Summit Scientific**

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

Calcium	193	0.0568	mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B
Magnesium	47.7	0.0568	"	"	"	"	"	"
Sodium	23.2	0.0568	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.386	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.1			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0877	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.85			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVW01@6.0'**  
**2305374-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.020		mg/kg	10	BGE0618	05/17/23	05/18/23	EPA 8260B	
Toluene	ND	0.050		"	"	"	"	"	"	
Ethylbenzene	<b>0.24</b>	0.050		"	"	"	"	"	"	
Xylenes (total)	<b>14</b>	0.10		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	<b>13</b>	0.050		"	"	"	"	"	"	E
Naphthalene	<b>1.7</b>	0.038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>7600</b>	5.0		"	"	"	"	"	"	E

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		1180 %		50-150		"	"	"	"	S-02
Surrogate: Toluene-d8		84.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		400 %		50-150		"	"	"	"	S-02

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	<b>180</b>	50		mg/kg	1	BGE0619	05/17/23	05/18/23	EPA 8015M	
C28-C36 (ORO)	<b>52</b>	50		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		66.1 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVW01@6.0'**  
**2305374-08 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGE0633	05/18/23	05/19/23	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		"	"	"	"	"	"	
<b>Fluorene</b>	<b>0.0705</b>	0.00500		"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500		"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0168</b>	0.00500		"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>1.18</b>	0.250		"	50	"	"	05/19/23	"	
<b>2-Methylnaphthalene</b>	<b>2.87</b>	0.250		"	"	"	"	"	"	

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		57.2 %		40-150		"	"	05/19/23	"	
Surrogate: Fluoranthene-d10		70.6 %		40-150		"	"	"	"	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.677</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVW01@6.0'**  
**2305374-08 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B**

Analyte	Result	Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.447	0.232		mg/kg dry	1	BGF0155	06/05/23	06/07/23	EPA 6020B	
Barium	64.2	0.463		"	"	"	"	"	"	
Cadmium	ND	0.232		"	"	"	"	"	"	
Copper	1.34	0.463		"	"	"	"	"	"	
Lead	3.88	0.232		"	"	"	"	"	"	
Nickel	1.18	0.463		"	"	"	"	"	"	
Selenium	ND	0.301	0.203	"	"	"	"	"	"	
Silver	ND	0.0232		"	"	"	"	"	"	
Zinc	5.18	0.463		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: 05/15/23 00:00

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGF0260	06/07/23	06/08/23	EPA 7196A	

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

Date Sampled: 05/15/23 00:00

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	92.0	0.0579		mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B	
Magnesium	15.8	0.0579		"	"	"	"	"	"	
Sodium	52.8	0.0579		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: 05/15/23 00:00

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.34	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**PWVW01@6.0'**  
**2305374-08 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
% Solids	86.3			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Specific Conductance (EC)	0.214	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
pH	5.78			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**BKG01@6.0"**  
**2305374-09 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.139</b>	0.0100		mg/L	1	BGE0783	05/23/23	05/24/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Arsenic</b>	<b>0.391</b>	0.212		mg/kg dry	1	BGE0658	05/18/23	05/22/23	EPA 6020B	
<b>Barium</b>	<b>22.3</b>	0.424		"	"	"	"	"	"	
Cadmium	ND	0.212		"	"	"	"	"	"	
<b>Copper</b>	<b>1.01</b>	0.424		"	"	"	"	"	"	
<b>Lead</b>	<b>2.28</b>	0.212		"	"	"	"	"	"	
<b>Nickel</b>	<b>0.925</b>	0.424		"	"	"	"	"	"	
Selenium	ND	0.275	0.185	"	"	"	"	"	"	
Silver	ND	0.0212		"	"	"	"	"	"	
<b>Zinc</b>	<b>3.97</b>	0.424		"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGE0593	05/17/23	05/17/23	EPA 7196A	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Calcium</b>	<b>42.3</b>	0.0530		mg/L dry	1	BGE0771	05/22/23	05/23/23	EPA 6020B	
<b>Magnesium</b>	<b>6.40</b>	0.0530		"	"	"	"	"	"	
<b>Sodium</b>	<b>0.765</b>	0.0530		"	"	"	"	"	"	

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**BKG01@6.0"**  
**2305374-09 (Soil)**

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**Calculated Analysis**

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0290	0.00100		units	1	BGE0855	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.4			%	1	BGE0687	05/19/23	05/19/23	Calculation	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0499	0.0100		mmhos/cm	1	BGE0815	05/23/23	05/23/23	EPA 120.1	

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

Date Sampled: **05/15/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.06			pH Units	1	BGE0813	05/23/23	05/23/23	EPA 9045D	

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

## 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 BGE0618 - EPA 5030 Soil MS

##### Blank (BGE0618-BLK1)

Prepared: 05/17/23 Analyzed: 05/18/23

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	0.0428		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0421		"	0.0400		105	50-150			
Surrogate: 4-Bromofluorobenzene	0.0436		"	0.0400		109	50-150			

##### LCS (BGE0618-BS1)

Prepared: 05/17/23 Analyzed: 05/18/23

Benzene	0.126	0.0020	mg/kg	0.125		101	70-130			
Toluene	0.145	0.0050	"	0.125		116	70-130			
Ethylbenzene	0.124	0.0050	"	0.125		98.8	70-130			
m,p-Xylene	0.322	0.010	"	0.250		129	70-130			
o-Xylene	0.140	0.0050	"	0.125		112	70-130			
1,2,4-Trimethylbenzene	0.123	0.0050	"	0.125		98.1	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.125		96.2	70-130			
Naphthalene	0.124	0.0038	"	0.125		99.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0428		"	0.0400		107	50-150			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		104	50-150			

##### Matrix Spike (BGE0618-MS1)

Source: 2305357-01

Prepared: 05/17/23 Analyzed: 05/18/23

Benzene	0.113	0.0020	mg/kg	0.125	ND	90.8	70-130			
Toluene	0.140	0.0050	"	0.125	ND	112	70-130			
Ethylbenzene	0.149	0.0050	"	0.125	ND	119	70-130			
m,p-Xylene	0.292	0.010	"	0.250	ND	117	70-130			
o-Xylene	0.132	0.0050	"	0.125	ND	106	70-130			
1,2,4-Trimethylbenzene	0.147	0.0050	"	0.125	ND	118	70-130			
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125	ND	120	70-130			
Naphthalene	0.124	0.0038	"	0.125	ND	98.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0424		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0412		"	0.0400		103	50-150			

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

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06/12/23 11:48

**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 BGE0618 - EPA 5030 Soil MS**

Matrix Spike Dup (BGE0618-MSD1)	Source: 2305357-01			Prepared: 05/17/23 Analyzed: 05/18/23						
Benzene	0.112	0.0020	mg/kg	0.125	ND	89.4	70-130	1.55	30	
Toluene	0.140	0.0050	"	0.125	ND	112	70-130	0.343	30	
Ethylbenzene	0.146	0.0050	"	0.125	ND	117	70-130	1.81	30	
m,p-Xylene	0.285	0.010	"	0.250	ND	114	70-130	2.65	30	
o-Xylene	0.131	0.0050	"	0.125	ND	105	70-130	0.934	30	
1,2,4-Trimethylbenzene	0.147	0.0050	"	0.125	ND	118	70-130	0.387	30	
1,3,5-Trimethylbenzene	0.148	0.0050	"	0.125	ND	118	70-130	2.01	30	
Naphthalene	0.124	0.0038	"	0.125	ND	99.3	70-130	0.436	30	
Surrogate: 1,2-Dichloroethane-d4	0.0451		"	0.0400		113	50-150			
Surrogate: Toluene-d8	0.0426		"	0.0400		106	50-150			
Surrogate: 4-Bromofluorobenzene	0.0414		"	0.0400		103	50-150			



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Project Number: [none]  
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**Reported:**  
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**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 BGE0619 - EPA 3550A**

**Blank (BGE0619-BLK1)**

Prepared: 05/17/23 Analyzed: 05/18/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	14.4		"	12.5		115	30-150			

**LCS (BGE0619-BS1)**

Prepared: 05/17/23 Analyzed: 05/18/23

C10-C28 (DRO)	401	50	mg/kg	500		80.1	70-130			
Surrogate: o-Terphenyl	9.84		"	12.5		78.7	30-150			

**Matrix Spike (BGE0619-MS1)**

Source: 2305357-01

Prepared: 05/17/23 Analyzed: 05/18/23

C10-C28 (DRO)	502	50	mg/kg	500	ND	100	70-130			
Surrogate: o-Terphenyl	12.7		"	12.5		101	30-150			

**Matrix Spike Dup (BGE0619-MSD1)**

Source: 2305357-01

Prepared: 05/17/23 Analyzed: 05/18/23

C10-C28 (DRO)	434	50	mg/kg	500	ND	86.7	70-130	14.6	20	
Surrogate: o-Terphenyl	11.5		"	12.5		91.7	30-150			



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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

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## 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 BGE0633 - EPA 5030 Soil MS

##### Blank (BGE0633-BLK1)

Prepared & Analyzed: 05/18/23

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	0.0398		"	0.0333	119	40-150				
Surrogate: Fluoranthene-d10	0.0354		"	0.0333	106	40-150				

##### LCS (BGE0633-BS1)

Prepared & Analyzed: 05/18/23

Acenaphthene	0.0329	0.00500	mg/kg	0.0333	98.7	31-137				
Anthracene	0.0341	0.00500	"	0.0333	102	30-120				
Benzo (a) anthracene	0.0341	0.00500	"	0.0333	102	30-120				
Benzo (a) pyrene	0.0323	0.00500	"	0.0333	96.8	30-120				
Benzo (b) fluoranthene	0.0352	0.00500	"	0.0333	105	30-120				
Benzo (k) fluoranthene	0.0344	0.00500	"	0.0333	103	30-120				
Chrysene	0.0331	0.00500	"	0.0333	99.4	30-120				
Dibenz (a,h) anthracene	0.0314	0.00500	"	0.0333	94.2	30-120				
Fluoranthene	0.0340	0.00500	"	0.0333	102	30-120				
Fluorene	0.0348	0.00500	"	0.0333	104	30-120				
Indeno (1,2,3-cd) pyrene	0.0334	0.00500	"	0.0333	100	30-120				
Pyrene	0.0369	0.00500	"	0.0333	111	35-142				
1-Methylnaphthalene	0.0379	0.00500	"	0.0333	114	35-142				
2-Methylnaphthalene	0.0391	0.00500	"	0.0333	117	35-142				
Surrogate: 2-Methylnaphthalene-d10	0.0289		"	0.0333	86.7	40-150				
Surrogate: Fluoranthene-d10	0.0346		"	0.0333	104	40-150				

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

## 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

#### Batch BGE0633 - EPA 5030 Soil MS

Matrix Spike (BGE0633-MS1)			Source: 2305374-01		Prepared & Analyzed: 05/18/23						
Acenaphthene	0.0373	0.00500	mg/kg	0.0333	ND	112	31-137				
Anthracene	0.0238	0.00500	"	0.0333	ND	71.5	30-120				
Benzo (a) anthracene	0.0277	0.00500	"	0.0333	0.00980	53.8	30-120				
Benzo (a) pyrene	0.0227	0.00500	"	0.0333	ND	68.0	30-120				
Benzo (b) fluoranthene	0.0258	0.00500	"	0.0333	ND	77.4	30-120				
Benzo (k) fluoranthene	0.0249	0.00500	"	0.0333	ND	74.8	30-120				
Chrysene	0.0309	0.00500	"	0.0333	0.00400	80.8	30-120				
Dibenz (a,h) anthracene	0.0215	0.00500	"	0.0333	ND	64.6	30-120				
Fluoranthene	0.0285	0.00500	"	0.0333	ND	85.6	30-120				
Fluorene	0.0413	0.00500	"	0.0333	0.0322	27.5	30-120				QM-01
Indeno (1,2,3-cd) pyrene	0.0184	0.00500	"	0.0333	ND	55.3	30-120				
Pyrene	0.0285	0.00500	"	0.0333	0.00292	76.9	35-142				
1-Methylnaphthalene	0.314	0.00500	"	0.0333	0.415	NR	15-130				QM-01
2-Methylnaphthalene	0.505	0.00500	"	0.0333	0.889	NR	15-130				QM-01
Surrogate: 2-Methylnaphthalene-d10	0.0200		"	0.0333		60.1	40-150				
Surrogate: Fluoranthene-d10	0.0274		"	0.0333		82.3	40-150				

Matrix Spike Dup (BGE0633-MSD1)			Source: 2305374-01		Prepared & Analyzed: 05/18/23						
Acenaphthene	0.0434	0.00500	mg/kg	0.0333	ND	130	31-137	15.3	30		
Anthracene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	9.26	30		
Benzo (a) anthracene	0.0278	0.00500	"	0.0333	0.00980	54.1	30-120	0.264	30		
Benzo (a) pyrene	0.0216	0.00500	"	0.0333	ND	64.8	30-120	4.74	30		
Benzo (b) fluoranthene	0.0245	0.00500	"	0.0333	ND	73.5	30-120	5.20	30		
Benzo (k) fluoranthene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	10.7	30		
Chrysene	0.0325	0.00500	"	0.0333	0.00400	85.5	30-120	4.93	30		
Dibenz (a,h) anthracene	0.0224	0.00500	"	0.0333	ND	67.2	30-120	3.87	30		
Fluoranthene	0.0259	0.00500	"	0.0333	ND	77.8	30-120	9.55	30		
Fluorene	0.0458	0.00500	"	0.0333	0.0322	40.9	30-120	10.3	30		
Indeno (1,2,3-cd) pyrene	0.0190	0.00500	"	0.0333	ND	57.1	30-120	3.27	30		
Pyrene	0.0256	0.00500	"	0.0333	0.00292	67.9	35-142	11.0	30		
1-Methylnaphthalene	0.667	0.00500	"	0.0333	0.415	757	15-130	71.9	50		QM-01
2-Methylnaphthalene	0.926	0.00500	"	0.0333	0.889	110	15-130	58.7	50		QM-01
Surrogate: 2-Methylnaphthalene-d10	0.0258		"	0.0333		77.5	40-150				
Surrogate: Fluoranthene-d10	0.0238		"	0.0333		71.4	40-150				

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGE0783 - EPA 3050B**

**Blank (BGE0783-BLK1)**

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

Boron ND 0.0100 mg/L

**LCS (BGE0783-BS1)**

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

Boron 4.06 0.0100 mg/L 5.00 81.3 80-120

**Duplicate (BGE0783-DUP1)**

Source: 2305374-01

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

Boron 0.210 0.0100 mg/L 0.216 2.77 20

**Matrix Spike (BGE0783-MS1)**

Source: 2305374-01

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

Boron 4.31 0.0100 mg/L 5.00 0.216 81.9 75-125

**Matrix Spike Dup (BGE0783-MSD1)**

Source: 2305374-01

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

Boron 4.44 0.0100 mg/L 5.00 0.216 84.4 75-125 2.82 25



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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGE0658 - EPA 3050B**

**Blank (BGE0658-BLK1)**

Prepared: 05/18/23 Analyzed: 05/22/23

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 (BGE0658-BS1)**

Prepared: 05/18/23 Analyzed: 05/22/23

Arsenic	39.7	0.200	mg/kg wet	40.0	99.3	80-120
Barium	36.4	0.400	"	40.0	91.0	80-120
Cadmium	1.84	0.200	"	2.00	91.9	80-120
Copper	41.1	0.400	"	40.0	103	80-120
Lead	18.1	0.200	"	20.0	90.4	80-120
Nickel	39.9	0.400	"	40.0	99.7	80-120
Selenium	4.29	0.260	"	4.00	107	80-120
Silver	1.88	0.0200	"	2.00	94.0	80-120
Zinc	39.0	0.400	"	40.0	97.4	80-120

**Duplicate (BGE0658-DUP1)**

Source: 2305288-21

Prepared: 05/18/23 Analyzed: 05/22/23

Arsenic	0.184	0.211	mg/kg dry	0.213	14.4	20
Barium	12.0	0.421	"	11.9	0.840	20
Cadmium	0.0156	0.211	"	0.0181	15.0	20
Copper	0.852	0.421	"	0.907	6.27	20
Lead	1.91	0.211	"	1.96	2.46	20
Nickel	0.405	0.421	"	0.465	13.7	20
Selenium	ND	0.274	"	ND		20
Silver	0.00379	0.0211	"	0.00547	36.4	20
Zinc	2.78	0.421	"	2.83	1.52	20

QR-01

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGE0658 - EPA 3050B**

Matrix Spike (BGE0658-MS1)		Source: 2305288-21			Prepared: 05/18/23 Analyzed: 05/22/23						
Arsenic	14.9	0.211	mg/kg dry	42.1	0.213	35.0	75-125				QM-05
Barium	52.5	0.421	"	42.1	11.9	96.3	75-125				
Cadmium	1.94	0.211	"	2.11	0.0181	91.2	75-125				
Copper	15.9	0.421	"	42.1	0.907	35.7	75-125				QM-05
Lead	19.5	0.211	"	21.1	1.96	83.2	75-125				
Nickel	15.5	0.421	"	42.1	0.465	35.7	75-125				QM-05
Selenium	3.92	0.274	"	4.21	ND	93.2	75-125				
Silver	1.93	0.0211	"	2.11	0.00547	91.2	75-125				
Zinc	18.0	0.421	"	42.1	2.83	36.0	75-125				QM-05

Matrix Spike Dup (BGE0658-MSD1)		Source: 2305288-21			Prepared: 05/18/23 Analyzed: 05/22/23						
Arsenic	14.7	0.211	mg/kg dry	42.1	0.213	34.4	75-125	1.65	25		QM-05
Barium	54.5	0.421	"	42.1	11.9	101	75-125	3.67	25		
Cadmium	1.94	0.211	"	2.11	0.0181	91.2	75-125	0.0435	25		
Copper	15.8	0.421	"	42.1	0.907	35.5	75-125	0.684	25		QM-05
Lead	20.0	0.211	"	21.1	1.96	85.7	75-125	2.61	25		
Nickel	15.5	0.421	"	42.1	0.465	35.8	75-125	0.255	25		QM-05
Selenium	4.44	0.274	"	4.21	ND	105	75-125	12.3	25		
Silver	1.96	0.0211	"	2.11	0.00547	92.9	75-125	1.78	25		
Zinc	18.0	0.421	"	42.1	2.83	36.0	75-125	0.0726	25		QM-05

**Batch BGF0155 - EPA 3050B**

Blank (BGF0155-BLK1)		Prepared: 06/05/23 Analyzed: 06/07/23									
Arsenic	ND	0.200	mg/kg wet								
Barium	ND	0.400	"								
Cadmium	ND	0.200	"								
Copper	ND	0.400	"								
Lead	ND	0.200	"								
Nickel	ND	0.400	"								
Selenium	ND	0.260	"								
Silver	ND	0.0200	"								
Zinc	ND	0.400	"								

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGF0155 - EPA 3050B**

**LCS (BGF0155-BS1)**

Prepared: 06/05/23 Analyzed: 06/07/23

Arsenic	37.1	0.200	mg/kg wet	40.0		92.7	80-120			
Barium	39.7	0.400	"	40.0		99.3	80-120			
Cadmium	1.99	0.200	"	2.00		99.3	80-120			
Copper	37.8	0.400	"	40.0		94.6	80-120			
Lead	19.4	0.200	"	20.0		97.2	80-120			
Nickel	37.2	0.400	"	40.0		92.9	80-120			
Selenium	4.26	0.260	"	4.00		107	80-120			
Silver	2.00	0.0200	"	2.00		99.8	80-120			
Zinc	37.0	0.400	"	40.0		92.5	80-120			

**Duplicate (BGF0155-DUP1)**

Source: 2304650-01

Prepared: 06/05/23 Analyzed: 06/07/23

Arsenic	0.664	0.243	mg/kg dry		0.706			6.18	20	
Barium	47.3	0.486	"		72.3			41.7	20	QR-03
Cadmium	0.103	0.243	"		0.204			65.6	20	QR-01
Copper	2.92	0.486	"		6.57			77.1	20	QR-03
Lead	8.30	0.243	"		58.3			150	20	QR-03
Nickel	1.42	0.486	"		1.83			25.3	20	QR-03
Selenium	ND	0.316	"		ND				20	
Silver	0.0253	0.0243	"		0.0355			33.6	20	QR-03
Zinc	16.8	0.486	"		34.6			69.0	20	QR-03

**Matrix Spike (BGF0155-MS1)**

Source: 2304650-01

Prepared: 06/05/23 Analyzed: 06/07/23

Arsenic	15.7	0.243	mg/kg dry	48.6	0.706	30.7	75-125			QM-07
Barium	134	0.486	"	48.6	72.3	127	75-125			QM-07
Cadmium	2.75	0.243	"	2.43	0.204	105	75-125			
Copper	24.9	0.486	"	48.6	6.57	37.7	75-125			QM-07
Lead	298	0.243	"	24.3	58.3	985	75-125			QM-07
Nickel	17.0	0.486	"	48.6	1.83	31.2	75-125			QM-07
Selenium	4.58	0.316	"	4.86	ND	94.2	75-125			
Silver	2.46	0.0243	"	2.43	0.0355	99.6	75-125			
Zinc	57.8	0.486	"	48.6	34.6	47.8	75-125			QM-07

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGF0155 - EPA 3050B**

Matrix Spike Dup (BGF0155-MSD1)		Source: 2304650-01			Prepared: 06/05/23 Analyzed: 06/07/23					
Arsenic	15.8	0.243	mg/kg dry	48.6	0.706	31.0	75-125	0.903	25	QM-07
Barium	128	0.486	"	48.6	72.3	116	75-125	4.25	25	
Cadmium	2.63	0.243	"	2.43	0.204	99.8	75-125	4.41	25	
Copper	25.0	0.486	"	48.6	6.57	37.8	75-125	0.203	25	QM-07
Lead	289	0.243	"	24.3	58.3	947	75-125	3.13	25	QM-07
Nickel	17.1	0.486	"	48.6	1.83	31.3	75-125	0.314	25	QM-07
Selenium	4.50	0.316	"	4.86	ND	92.6	75-125	1.65	25	
Silver	2.38	0.0243	"	2.43	0.0355	96.3	75-125	3.32	25	
Zinc	57.5	0.486	"	48.6	34.6	47.2	75-125	0.482	25	QM-07

Summit Scientific

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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGE0593 - 3060A Mod**

<b>Blank (BGE0593-BLK1)</b>					Prepared & Analyzed: 05/17/23					
Chromium, Hexavalent	ND	0.30	mg/kg wet							
<b>LCS (BGE0593-BS1)</b>					Prepared & Analyzed: 05/17/23					
Chromium, Hexavalent	23.1	0.30	mg/kg wet	25.0		92.4	80-120			
<b>Duplicate (BGE0593-DUP1)</b>					Source: 2305360-01 Prepared & Analyzed: 05/17/23					
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
<b>Matrix Spike (BGE0593-MS1)</b>					Source: 2305360-01 Prepared & Analyzed: 05/17/23					
Chromium, Hexavalent	29.2	0.30	mg/kg dry	30.7	ND	95.2	75-125			
<b>Matrix Spike Dup (BGE0593-MSD1)</b>					Source: 2305360-01 Prepared & Analyzed: 05/17/23					
Chromium, Hexavalent	25.8	0.30	mg/kg dry	30.7	ND	84.2	75-125	12.3	20	

**Batch BGF0260 - 3060A Mod**

<b>Blank (BGF0260-BLK1)</b>					Prepared: 06/07/23 Analyzed: 06/08/23					
Chromium, Hexavalent	ND	0.30	mg/kg wet							
<b>LCS (BGF0260-BS1)</b>					Prepared: 06/07/23 Analyzed: 06/08/23					
Chromium, Hexavalent	23.4	0.30	mg/kg wet	25.0		93.6	80-120			
<b>Duplicate (BGF0260-DUP1)</b>					Source: 2305319-01 Prepared: 06/07/23 Analyzed: 06/08/23					
Chromium, Hexavalent	ND	0.30	mg/kg dry		ND				20	
<b>Matrix Spike (BGF0260-MS1)</b>					Source: 2305319-01 Prepared: 06/07/23 Analyzed: 06/08/23					
Chromium, Hexavalent	33.4	0.30	mg/kg dry	32.2	ND	104	75-125			



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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

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

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

**Batch BGF0260 - 3060A Mod**

Matrix Spike Dup (BGF0260-MSD1)		Source: 2305319-01			Prepared: 06/07/23 Analyzed: 06/08/23					
Chromium, Hexavalent	35.0	0.30	mg/kg dry	32.2	ND	109	75-125	4.52	20	



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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGE0771 - General Preparation**

**Blank (BGE0771-BLK1)**

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

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

**LCS (BGE0771-BS1)**

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

Calcium	5.47	0.0500	mg/L wet	5.00	109	70-130
Magnesium	5.04	0.0500	"	5.00	101	70-130
Sodium	5.19	0.0500	"	5.00	104	70-130



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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

### 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 BGE0687 - General Preparation

Duplicate (BGE0687-DUP1)		Source: 2305374-01			Prepared & Analyzed: 05/19/23					
% Solids	93.0		%		93.3		0.327		20	



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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

**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 BGE0815 - General Preparation**

**Blank (BGE0815-BLK1)**

Prepared & Analyzed: 05/23/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGE0815-BS1)**

Prepared & Analyzed: 05/23/23

Specific Conductance (EC) 0.153 0.0100 mmhos/cm 0.150 102 95-105

**Duplicate (BGE0815-DUP1)**

**Source: 2305374-01**

Prepared & Analyzed: 05/23/23

Specific Conductance (EC) 0.695 0.0100 mmhos/cm 0.705 1.43 20



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Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

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

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

**Batch BGE0813 - General Preparation**

**LCS (BGE0813-BS1)**

Prepared & Analyzed: 05/23/23

pH	9.08	pH Units	9.18	98.9	95-105
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**Duplicate (BGE0813-DUP1)**

Source: 2305374-01

Prepared & Analyzed: 05/23/23

pH	6.52	pH Units	6.51	0.153	20
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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Loustalet 64N64W 30

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
06/12/23 11:48

### Notes and Definitions

S-02	The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QR-01	Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-05	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
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