

# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

May 24, 2023

Paul Henehan  
Fremont Environmental  
PO Box 1289  
Wellington, CO 80549  
RE: Noble - Bernhardt FAC  
Work Order #2305349

Enclosed are the results of analyses for samples received by Summit Scientific on 05/15/23 18:13. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Sheely".

Scott Sheely For Paul Shrewsbury  
President



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01 0.5 feet	2305349-01	Soil	05/15/23 13:39	05/15/23 18:13
AST02 0.5 feet	2305349-02	Soil	05/15/23 15:32	05/15/23 18:13
PWV01 N WALL 2 feet	2305349-03	Soil	05/15/23 13:58	05/15/23 18:13
PWV02 FLOOR 4 feet	2305349-04	Soil	05/15/23 15:29	05/15/23 18:13
SEP01 DL 3 feet	2305349-05	Soil	05/15/23 15:12	05/15/23 18:13
SEP02 DL 4 feet	2305349-06	Soil	05/15/23 14:28	05/15/23 18:13

Summit Scientific

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		<b>Send Data To:</b>	<b>Send Invoice To:</b>
Client: Fremont Environmental		Project Manager: Paul Henehan	Company: <u>Noble</u>
Address:		E-Mail: Fremont Distribution List	Project Name/Location: <u>Bernhardt FAC</u>
City/State/Zip:			AFE#:
Phone: 303-261-6246		Project Name: <u>Bernhardt FAC</u>	PO/Billing Codes: <u>UWRWE-A2660-ABN</u>
Sampler Name: Stanley Gilbert		Project Number:	Contact: <u>Mike Montoya</u>

					Preservative				Matrix				Analysis Requested						Special Instructions		
ID	Sample Description	Date Sampled	Time Sampled	# of containers	HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate		HOLD	
1	AST01 0.5 feet	5/15/23	13:39	2			X			X			X	X	X	X					
2	AST02 0.5 feet		15:32	2			X			X			X	X	X	X					
3	PWV01N Wall 2 feet		13:58	2			X			X			X	X	X	X					
4	PWV02 floor 4 feet		15:29	2			X			X			X	X	X	X					
5	SEP01 DL 3 feet		15:12	2			X			X			X	X	X	X					
6	SEP02 DL 4 feet		14:28	2			X			X			X	X	X	X					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by: <u>Stanley Gilbert</u>	Date/Time: <u>5/15/23 18:13</u>	Received by: <u>Mike Am</u>	Date/Time: <u>5/15/23 18:13</u>	TAT Business Days	Field DO	Notes:
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: _____	Corrected Temperature <u>20.7°C</u>	IR gun #: <u>02</u>	HNO3 lot #: _____			

S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2305349Client: Fremont Environmental Client Project ID: Bernhardt FACShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #:                     
☒ ☐ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 20.70 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"/>	<u>on ice</u>
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 type="checkbox"/>	<input checked="" 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.
GAC  
 Custodian Printed Name

5/15/22 18:13  
 Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**AST01 0.5 feet**  
**2305349-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGE0521	05/16/23	05/16/23	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 13:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0571	143 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0523	05/16/23	05/16/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.2	106 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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PO Box 1289  
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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**AST01 0.5 feet**  
**2305349-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0535	05/16/23	05/17/23	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 13:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0329	98.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0187	56.0 %	40-150		"	"	"	"	

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

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0749</b>	0.0100	mg/L	1	BGE0721	05/21/23	05/22/23	EPA 6020B	

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

Date Sampled: **05/15/23 13:39**

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

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**AST01 0.5 feet**  
**2305349-01 (Soil)**

**Summit Scientific**

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

Calcium	16.4	0.0541	mg/L dry	1	BGE0697	05/19/23	05/23/23	EPA 6020B
Magnesium	7.31	0.0541	"	"	"	"	"	"
Sodium	10.8	0.0541	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.558	0.00100	units	1	BGE0845	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.4		%	1	BGE0628	05/18/23	05/18/23	Calculation	

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

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.244	0.0100	mmhos/cm	1	BGE0758	05/22/23	05/22/23	EPA 120.1	

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

Date Sampled: **05/15/23 13:39**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.43		pH Units	1	BGE0757	05/22/23	05/22/23	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**AST02 0.5 feet**  
**2305349-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGE0521	05/16/23	05/16/23	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 15:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0518	130 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0400	100 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0523	05/16/23	05/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.3	122 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**AST02 0.5 feet**  
**2305349-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0535	05/16/23	05/17/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>0.0108</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>0.0121</b>	0.00500	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>0.00521</b>	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
<b>Chrysene</b>	<b>0.0139</b>	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>0.00665</b>	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
<b>Pyrene</b>	<b>0.0104</b>	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.00625</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0138	41.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0220	66.1 %	40-150		"	"	"	"	

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

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.124</b>	0.0100	mg/L	1	BGE0721	05/21/23	05/22/23	EPA 6020B	

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

Date Sampled: **05/15/23 15:32**

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

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**AST02 0.5 feet**  
**2305349-02 (Soil)**

**Summit Scientific**

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

Calcium	28.3	0.0538	mg/L dry	1	BGE0697	05/19/23	05/23/23	EPA 6020B
Magnesium	9.27	0.0538	"	"	"	"	"	"
Sodium	3.94	0.0538	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.164	0.00100	units	1	BGE0845	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.0		%	1	BGE0628	05/18/23	05/18/23	Calculation	

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

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.304	0.0100	mmhos/cm	1	BGE0758	05/22/23	05/22/23	EPA 120.1	

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

Date Sampled: **05/15/23 15:32**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.66		pH Units	1	BGE0757	05/22/23	05/22/23	EPA 9045D	

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**PWV01 N WALL 2 feet  
2305349-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	<b>0.020</b>	0.0020	mg/kg	1	BGE0521	05/16/23	05/17/23	EPA 8260B	
Toluene	<b>0.19</b>	0.0050	"	"	"	"	"	"	
Ethylbenzene	<b>0.021</b>	0.0050	"	"	"	"	"	"	
Xylenes (total)	<b>0.26</b>	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	<b>0.037</b>	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	<b>0.050</b>	0.0050	"	"	"	"	"	"	
Naphthalene	<b>0.0065</b>	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	<b>1.9</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0452	113 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0406	102 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0523	05/16/23	05/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	17.3	138 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**PWV01 N WALL 2 feet**  
**2305349-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0535	05/16/23	05/17/23	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	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.00658</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0143	42.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0234	70.1 %	40-150		"	"	"	"	

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

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0964</b>	0.0100	mg/L	1	BGE0721	05/21/23	05/22/23	EPA 6020B	

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

Date Sampled: **05/15/23 13:58**

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC  
Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**PWV01 N WALL 2 feet  
2305349-03 (Soil)**

**Summit Scientific**

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

Calcium	57.9	0.0561	mg/L dry	1	BGE0697	05/19/23	05/23/23	EPA 6020B
Magnesium	17.8	0.0561	"	"	"	"	"	"
Sodium	4.83	0.0561	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.142	0.00100	units	1	BGE0845	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.2		%	1	BGE0628	05/18/23	05/18/23	Calculation	

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

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.224	0.0100	mmhos/cm	1	BGE0758	05/22/23	05/22/23	EPA 120.1	

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

Date Sampled: **05/15/23 13:58**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.96		pH Units	1	BGE0757	05/22/23	05/22/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**PWV02 FLOOR 4 feet**  
**2305349-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGE0521	05/16/23	05/17/23	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 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0460	115 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0419	105 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0523	05/16/23	05/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	16.2	130 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**PWV02 FLOOR 4 feet**  
**2305349-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGE0535	05/16/23	05/17/23	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	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.00702</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.00675</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0138	41.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0260	78.1 %	40-150		"	"	"	"	

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

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>Boron</b>	<b>0.0909</b>	0.0100	mg/L	1	BGE0721	05/21/23	05/22/23	EPA 6020B	

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

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**PWV02 FLOOR 4 feet  
2305349-04 (Soil)**

**Summit Scientific**

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

Calcium	32.4	0.0556	mg/L dry	1	BGE0697	05/19/23	05/23/23	EPA 6020B
Magnesium	8.02	0.0556	"	"	"	"	"	"
Sodium	11.1	0.0556	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.453	0.00100	units	1	BGE0845	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.0		%	1	BGE0628	05/18/23	05/18/23	Calculation	

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

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.371	0.0100	mmhos/cm	1	BGE0758	05/22/23	05/22/23	EPA 120.1	

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

Date Sampled: **05/15/23 15:29**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.61		pH Units	1	BGE0757	05/22/23	05/22/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**SEP01 DL 3 feet**  
**2305349-05 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGE0521	05/16/23	05/17/23	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 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0464	116 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0401	100 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGE0523	05/16/23	05/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.0	120 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**SEP01 DL 3 feet**  
**2305349-05 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0535	05/16/23	05/17/23	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 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0152	45.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0202	60.6 %	40-150		"	"	"	"	

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

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.118</b>	0.0100	mg/L	1	BGE0721	05/21/23	05/22/23	EPA 6020B	

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

Date Sampled: **05/15/23 15:12**

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

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC  
Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**SEP01 DL 3 feet**  
**2305349-05 (Soil)**

**Summit Scientific**

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

Calcium	23.6	0.0556	mg/L dry	1	BGE0697	05/19/23	05/23/23	EPA 6020B
Magnesium	10.4	0.0556	"	"	"	"	"	"
Sodium	15.7	0.0556	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.677	0.00100	units	1	BGE0845	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BGE0628	05/18/23	05/18/23	Calculation	

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

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.387	0.0100	mmhos/cm	1	BGE0758	05/22/23	05/22/23	EPA 120.1	

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

Date Sampled: **05/15/23 15:12**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.12		pH Units	1	BGE0757	05/22/23	05/22/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**SEP02 DL 4 feet**  
**2305349-06 (Soil)**

**Summit Scientific**

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

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGE0521	05/16/23	05/17/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>Xylenes (total)</b>	<b>0.052</b>	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
<b>1,3,5-Trimethylbenzene</b>	<b>0.22</b>	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
<b>Gasoline Range Hydrocarbons</b>	<b>5.1</b>	0.50	"	"	"	"	"	"	

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0451	113 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0416	104 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0479	120 %	50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
<b>C10-C28 (DRO)</b>	<b>57</b>	50	mg/kg	1	BGE0523	05/16/23	05/17/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.7	102 %	30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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





Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henahan

**Reported:**  
05/24/23 16:32

**SEP02 DL 4 feet**  
**2305349-06 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGE0535	05/16/23	05/17/23	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>0.00890</b>	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0129</b>	0.00500	"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.00899</b>	0.00500	"	"	"	"	"	"	

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0140	42.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0184	55.1 %	40-150		"	"	"	"	

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

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.194</b>	0.0100	mg/L	1	BGE0721	05/21/23	05/22/23	EPA 6020B	

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

Date Sampled: **05/15/23 14:28**

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

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**SEP02 DL 4 feet**  
**2305349-06 (Soil)**

**Summit Scientific**

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

Calcium	409	0.0550	mg/L dry	1	BGE0697	05/19/23	05/23/23	EPA 6020B
Magnesium	110	0.0550	"	"	"	"	"	"
Sodium	83.6	0.0550	"	"	"	"	"	"

**Calculated Analysis**

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.947	0.00100	units	1	BGE0845	05/24/23	05/24/23	Calculation	

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

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.9		%	1	BGE0628	05/18/23	05/18/23	Calculation	

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

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.408	0.0100	mmhos/cm	1	BGE0758	05/22/23	05/22/23	EPA 120.1	

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

Date Sampled: **05/15/23 14:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.11		pH Units	1	BGE0757	05/22/23	05/22/23	EPA 9045D	

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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

## 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 BGE0521 - EPA 5030 Soil MS

##### Blank (BGE0521-BLK1)

Prepared & Analyzed: 05/16/23

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	0.0468		"	0.0400		117	50-150			
Surrogate: Toluene-d8	0.0382		"	0.0400		95.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0398		"	0.0400		99.4	50-150			

##### LCS (BGE0521-BS1)

Prepared & Analyzed: 05/16/23

Benzene	0.0744	0.0020	mg/kg	0.100		74.4	70-130			
Toluene	0.0877	0.0050	"	0.100		87.7	70-130			
Ethylbenzene	0.106	0.0050	"	0.100		106	70-130			
m,p-Xylene	0.212	0.010	"	0.200		106	70-130			
o-Xylene	0.101	0.0050	"	0.100		101	70-130			
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.100		116	70-130			
1,3,5-Trimethylbenzene	0.120	0.0050	"	0.100		120	70-130			
Naphthalene	0.104	0.0038	"	0.100		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0398		"	0.0400		99.4	50-150			
Surrogate: Toluene-d8	0.0376		"	0.0400		94.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.4	50-150			

##### Matrix Spike (BGE0521-MS1)

Source: 2305349-01

Prepared & Analyzed: 05/16/23

Benzene	0.0737	0.0020	mg/kg	0.100	ND	73.7	70-130			
Toluene	0.0885	0.0050	"	0.100	ND	88.5	70-130			
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130			
m,p-Xylene	0.219	0.010	"	0.200	ND	110	70-130			
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130			
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.100	ND	122	70-130			
1,3,5-Trimethylbenzene	0.123	0.0050	"	0.100	ND	123	70-130			
Naphthalene	0.108	0.0038	"	0.100	ND	108	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0419		"	0.0400		105	50-150			
Surrogate: Toluene-d8	0.0369		"	0.0400		92.2	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.2	50-150			

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Project Number: [none]  
Project Manager: Paul Henchan

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## 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 BGE0521 - EPA 5030 Soil MS

Matrix Spike Dup (BGE0521-MSD1)	Source: 2305349-01			Prepared & Analyzed: 05/16/23							
Benzene	0.0746	0.0020	mg/kg	0.100	ND	74.6	70-130	1.17	30		
Toluene	0.0896	0.0050	"	0.100	ND	89.6	70-130	1.25	30		
Ethylbenzene	0.107	0.0050	"	0.100	ND	107	70-130	0.196	30		
m,p-Xylene	0.212	0.010	"	0.200	ND	106	70-130	3.28	30		
o-Xylene	0.103	0.0050	"	0.100	ND	103	70-130	0.0874	30		
1,2,4-Trimethylbenzene	0.121	0.0050	"	0.100	ND	121	70-130	0.816	30		
1,3,5-Trimethylbenzene	0.122	0.0050	"	0.100	ND	122	70-130	1.10	30		
Naphthalene	0.111	0.0038	"	0.100	ND	111	70-130	2.53	30		
Surrogate: 1,2-Dichloroethane-d4	0.0437		"	0.0400		109	50-150				
Surrogate: Toluene-d8	0.0386		"	0.0400		96.6	50-150				
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.6	50-150				

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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**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 BGE0523 - EPA 3550A**

**Blank (BGE0523-BLK1)**

Prepared & Analyzed: 05/16/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	14.3		"	12.5	114		30-150			

**LCS (BGE0523-BS1)**

Prepared & Analyzed: 05/16/23

C10-C28 (DRO)	480	50	mg/kg	500	96.1		70-130			
Surrogate: o-Terphenyl	12.7		"	12.5	101		30-150			

**Matrix Spike (BGE0523-MS1)**

Source: 2305349-01

Prepared & Analyzed: 05/16/23

C10-C28 (DRO)	531	50	mg/kg	500	32.3	99.7	70-130			
Surrogate: o-Terphenyl	11.2		"	12.5	89.4		30-150			

**Matrix Spike Dup (BGE0523-MSD1)**

Source: 2305349-01

Prepared & Analyzed: 05/16/23

C10-C28 (DRO)	475	50	mg/kg	500	32.3	88.5	70-130	11.2	20	
Surrogate: o-Terphenyl	6.55		"	12.5	52.4		30-150			

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Project: Noble - Bernhardt FAC  
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Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

## 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 BGE0535 - EPA 5030 Soil MS

##### Blank (BGE0535-BLK1)

Prepared & Analyzed: 05/16/23

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	0.0173		"	0.0333		51.9		40-150			
Surrogate: Fluoranthene-d10	0.0343		"	0.0333		103		40-150			

##### LCS (BGE0535-BS1)

Prepared & Analyzed: 05/16/23

Acenaphthene	0.0258	0.00500	mg/kg	0.0333		77.5		31-137			
Anthracene	0.0313	0.00500	"	0.0333		94.0		30-120			
Benzo (a) anthracene	0.0264	0.00500	"	0.0333		79.1		30-120			
Benzo (a) pyrene	0.0239	0.00500	"	0.0333		71.7		30-120			
Benzo (b) fluoranthene	0.0159	0.00500	"	0.0333		47.7		30-120			
Benzo (k) fluoranthene	0.0213	0.00500	"	0.0333		63.8		30-120			
Chrysene	0.0343	0.00500	"	0.0333		103		30-120			
Dibenz (a,h) anthracene	0.0291	0.00500	"	0.0333		87.3		30-120			
Fluoranthene	0.0308	0.00500	"	0.0333		92.4		30-120			
Fluorene	0.0255	0.00500	"	0.0333		76.5		30-120			
Indeno (1,2,3-cd) pyrene	0.0300	0.00500	"	0.0333		89.9		30-120			
Pyrene	0.0290	0.00500	"	0.0333		86.9		35-142			
1-Methylnaphthalene	0.0219	0.00500	"	0.0333		65.7		35-142			
2-Methylnaphthalene	0.0146	0.00500	"	0.0333		43.7		35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0204		"	0.0333		61.3		40-150			
Surrogate: Fluoranthene-d10	0.0311		"	0.0333		93.4		40-150			

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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

## 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 BGE0535 - EPA 5030 Soil MS

##### Matrix Spike (BGE0535-MS1)

Source: 2305333-01

Prepared & Analyzed: 05/16/23

Acenaphthene	0.0188	0.00500	mg/kg	0.0333	ND	56.5	31-137				
Anthracene	0.0219	0.00500	"	0.0333	ND	65.8	30-120				
Benzo (a) anthracene	0.0211	0.00500	"	0.0333	ND	63.2	30-120				
Benzo (a) pyrene	0.0180	0.00500	"	0.0333	ND	54.1	30-120				
Benzo (b) fluoranthene	0.0181	0.00500	"	0.0333	ND	54.2	30-120				
Benzo (k) fluoranthene	0.0136	0.00500	"	0.0333	ND	40.8	30-120				
Chrysene	0.0250	0.00500	"	0.0333	ND	74.9	30-120				
Dibenz (a,h) anthracene	0.0348	0.00500	"	0.0333	ND	104	30-120				
Fluoranthene	0.0225	0.00500	"	0.0333	ND	67.6	30-120				
Fluorene	0.0188	0.00500	"	0.0333	ND	56.4	30-120				
Indeno (1,2,3-cd) pyrene	0.0380	0.00500	"	0.0333	ND	114	30-120				
Pyrene	0.0207	0.00500	"	0.0333	ND	62.1	35-142				
1-Methylnaphthalene	0.0217	0.00500	"	0.0333	ND	65.2	15-130				
2-Methylnaphthalene	0.0141	0.00500	"	0.0333	ND	42.4	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0202		"	0.0333		60.6	40-150				
Surrogate: Fluoranthene-d10	0.0245		"	0.0333		73.6	40-150				

##### Matrix Spike Dup (BGE0535-MSD1)

Source: 2305333-01

Prepared & Analyzed: 05/16/23

Acenaphthene	0.0177	0.00500	mg/kg	0.0333	ND	53.2	31-137	5.99	30		
Anthracene	0.0210	0.00500	"	0.0333	ND	62.9	30-120	4.40	30		
Benzo (a) anthracene	0.0207	0.00500	"	0.0333	ND	62.2	30-120	1.65	30		
Benzo (a) pyrene	0.0189	0.00500	"	0.0333	ND	56.8	30-120	4.71	30		
Benzo (b) fluoranthene	0.0182	0.00500	"	0.0333	ND	54.5	30-120	0.489	30		
Benzo (k) fluoranthene	0.0153	0.00500	"	0.0333	ND	45.8	30-120	11.7	30		
Chrysene	0.0226	0.00500	"	0.0333	ND	67.9	30-120	9.81	30		
Dibenz (a,h) anthracene	0.0395	0.00500	"	0.0333	ND	119	30-120	12.8	30		
Fluoranthene	0.0215	0.00500	"	0.0333	ND	64.6	30-120	4.45	30		
Fluorene	0.0176	0.00500	"	0.0333	ND	52.9	30-120	6.49	30		
Indeno (1,2,3-cd) pyrene	0.0389	0.00500	"	0.0333	ND	117	30-120	2.34	30		
Pyrene	0.0189	0.00500	"	0.0333	ND	56.8	35-142	9.01	30		
1-Methylnaphthalene	0.0137	0.00500	"	0.0333	ND	41.2	15-130	45.1	50		
2-Methylnaphthalene	0.0141	0.00500	"	0.0333	ND	42.4	15-130	0.0896	50		
Surrogate: 2-Methylnaphthalene-d10	0.0304		"	0.0333		91.1	40-150				
Surrogate: Fluoranthene-d10	0.0233		"	0.0333		69.8	40-150				

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PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**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 BGE0721 - EPA 3050B**

**Blank (BGE0721-BLK1)**

Prepared: 05/21/23 Analyzed: 05/22/23

Boron ND 0.0100 mg/L

**LCS (BGE0721-BS1)**

Prepared: 05/21/23 Analyzed: 05/22/23

Boron 4.59 0.0100 mg/L 5.00 91.7 80-120

**Duplicate (BGE0721-DUP1)**

**Source: 2305349-01**

Prepared: 05/21/23 Analyzed: 05/22/23

Boron 0.0586 0.0100 mg/L 0.0749 24.4 20 QR-03

**Matrix Spike (BGE0721-MS1)**

**Source: 2305349-01**

Prepared: 05/21/23 Analyzed: 05/22/23

Boron 4.56 0.0100 mg/L 5.00 0.0749 89.7 75-125

**Matrix Spike Dup (BGE0721-MSD1)**

**Source: 2305349-01**

Prepared: 05/21/23 Analyzed: 05/22/23

Boron 4.47 0.0100 mg/L 5.00 0.0749 87.9 75-125 2.05 25

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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**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 BGE0697 - General Preparation**

**Blank (BGE0697-BLK1)**

Prepared: 05/19/23 Analyzed: 05/23/23

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

**LCS (BGE0697-BS1)**

Prepared: 05/19/23 Analyzed: 05/23/23

Calcium	4.77	0.0500	mg/L wet	5.00	95.3	70-130
Magnesium	4.48	0.0500	"	5.00	89.5	70-130
Sodium	4.42	0.0500	"	5.00	88.4	70-130

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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

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

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

**Batch BGE0628 - General Preparation**

Duplicate (BGE0628-DUP1)		Source: 2305349-01			Prepared & Analyzed: 05/18/23						
% Solids	93.1		%		92.4			0.699		20	

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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**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 BGE0758 - General Preparation**

**Blank (BGE0758-BLK1)**

Prepared & Analyzed: 05/22/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGE0758-BS1)**

Prepared & Analyzed: 05/22/23

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

**Duplicate (BGE0758-DUP1)**

**Source: 2305013-19**

Prepared & Analyzed: 05/22/23

Specific Conductance (EC) 0.286 0.0100 mmhos/cm 0.271 5.57 20

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Fremont Environmental  
PO Box 1289  
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Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henchan

**Reported:**  
05/24/23 16:32

**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 BGE0757 - General Preparation**

**LCS (BGE0757-BS1)**

Prepared & Analyzed: 05/22/23

pH	9.08	pH Units	9.18	98.9	95-105
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**Duplicate (BGE0757-DUP1)**

Source: 2305349-01

Prepared & Analyzed: 05/22/23

pH	8.18	pH Units	7.43	9.61	20
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PO Box 1289  
Wellington CO, 80549

Project: Noble - Bernhardt FAC

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
05/24/23 16:32

### 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.

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