

FREMONT ENVIRONMENTAL INC.

February 3, 2020

Mr. Jacob Evans
Noble Energy
2115 117th Avenue
Greeley, CO 80634

Subject: **Excavation Report (Produced Water Piping Release)**
 Todd LC 25 Econode
 SWSW Sec 25, T9N, R59W
 Weld County, Colorado
 Fremont Project No. C020-001
 Facility #440078

Dear Mr. Evans:

Enclosed please find a copy of the above referenced Excavation Report for the LC 25 Econode release site in Weld County, Colorado. The enclosed report describes excavation actions to remove impacted soil from the site.

Since the excavation work has removed the surface and subsurface petroleum impacts as well as delineated the extent of inorganic impacts, Noble Energy Inc. should request that a No Further Action (NFA) determination be provided by the Colorado Oil and Gas Conservation Commission (COGCC) for this site.

Fremont appreciates the opportunity to provide this service.

Please contact me at (303) 956-8714 if you require any additional information.

Sincerely,
FREMONT ENVIRONMENTAL INC.



Paul V. Henehan, P.E.
Senior Consultant

Enclosure

EXCAVATION REPORT
NOBLE ENERGY INC.
TODD LC 25 ECONODE
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C020-001
FACILITY # 440078

Prepared by:

Fremont Environmental Inc.
1759 Redwing Lane
Broomfield, CO 80020
(303) 956-8714

February 3, 2020

TABLE OF CONTENTS

1.0 INTRODUCTION	1
2.0 BACKGROUND INFORMATION	1
2.1 Site Location	1
2.2 Site History	1
3.0 FIELD ACTIVITIES	2
4.0 DISCUSSION	3
5.0 REMARKS	3

Table

Table 1: Summary of Petroleum Constituents in Soil Chemistry Data

Figures

Figure 1: Site Location Map

Figure 2: Site Map

Figure 3: Excavation and Sample Locations for Laboratory Analyses

Appendix

Appendix A: Laboratory Documentation

EXCAVATION REPORT
NOBLE ENERGY INC.
TODD LC 25 ECONODE
WELD COUNTY, COLORADO
FREMONT PROJECT NO. C020-001
FACILITY # 440078

1.0 INTRODUCTION

The purpose of this document is to present information collected during the delineation and excavation of petroleum-impacted soil at the LC 25 Econode Pad release location in Weld County, Colorado. This excavation project was completed on January 22, 2020.

2.0 BACKGROUND INFORMATION

2.1 Site Location

The LC 11-15 Econode site is located approximately seven miles east northeast of Keota, Colorado in Weld County as shown on Figure 1. The site is located in grasslands approximately three miles southeast of the intersection of County Road 115 and County Road 104. The location is further described as the SW $\frac{1}{4}$ of the SW $\frac{1}{4}$ of Section 25, Township 9N, Range 59W.

2.2 Site History

As illustrated on the attached figures, the excavation area consisted of the area surrounding buried produced water piping at the LC 25 Econode pad. Surficial soil impacts were identified adjacent to a separator location during a routine site inspection which revealed a failure of the produced water piping.

3.0 FIELD ACTIVITIES

Remediation efforts consisted of the excavation of petroleum-impacted soil at this site. The soil consisted of roadbase which was underlain by silty clay to a depth of at least six feet. Groundwater was not encountered during the excavation. The 16' x 16' excavated area is shown on Figure 3.

Excavation was initiated at the LC 25 Econode location on January 12, 2020. The facility was temporarily shut in to allow impacted soil removal prior to excavation. Soil removal was undertaken with a hydrovac, hand tools and a mini-excavator due to the proximity of equipment.

The initial sampling of the excavated area on January 13, 2020 indicated that further excavation was required in all directions. After additional soil removal, another sampling event was conducted on January 21, 2020; these analyses indicated that petroleum constituents were less than the Colorado Oil and Gas Conservation Commission's (COGCC's) Table 910-1 limits. However, inorganic constituents, including electrical conductivity (EC), pH and sodium absorption ratio (SAR), exceeded the COGCC Table 910-1 standards. Therefore, test pits to delineate the extent of the inorganic impacts were excavated and sampled on January 22, 2020. The analyses of soil samples from these test pits has adequately defined the extent of inorganic impacts.

The soil samples were analyzed by Summit Scientific Inc. of Golden, Colorado for benzene, toluene, ethylbenzene and xylenes (BTEX), naphthalene, Total Petroleum Hydrocarbons - Gasoline Range Organics (TPH-GRO) by EPA method 8260C, TPH - Diesel Range Organics (TPH-DRO) by EPA method 8015, SAR by EPA method 6020, and EC by EPA method 120.1. The laboratory reports and chain-of-custody documentation are included in Appendix A. Summaries of the laboratory data are included in Table 1.

A total of 85 cubic yards of petroleum impacted soil was removed by 1888 Oilfield Services, Inc. from the location. Approximately 80 yards of impacted soil was transported and disposed of at the Waste Management North Weld County Landfill in Ault, Colorado as non-hazardous waste. Approximately 5 yards of impacted sludge that was removed using a hydrovac was disposed of at Allied Waste Services in Commerce City, Colorado.

4.0 DISCUSSION

As demonstrated by the soil sampling, the petroleum impacted soil was removed from the site by excavation. Further, the extent of inorganic impacts has been delineated. This was confirmed by the analyses of the soil samples collected from the test pits, excavation walls and floor which were below the COGCC Table 910-1 limits. Approximately 85 cubic yards of impacted soil were removed and transported to the landfill. No groundwater was encountered during the excavation. Therefore, Noble should request a no further action (NFA) determination from the COGCC.

5.0 REMARKS

The discussion and conclusions contained in this report represent our professional opinions. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeologic and engineering practices at this time and location. Other than this, no warranty is implied or intended.

This report was prepared by **FREMONT ENVIRONMENTAL INC.**



2/3/2020

Date_____

Ethan Black
Geologist

Reviewed by:



2/3/2020

Date _____

Paul V. Henehan, P.E.

Senior Consultant

TABLE

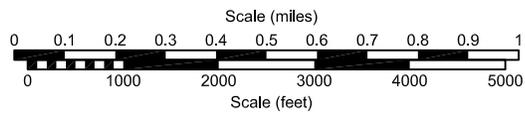
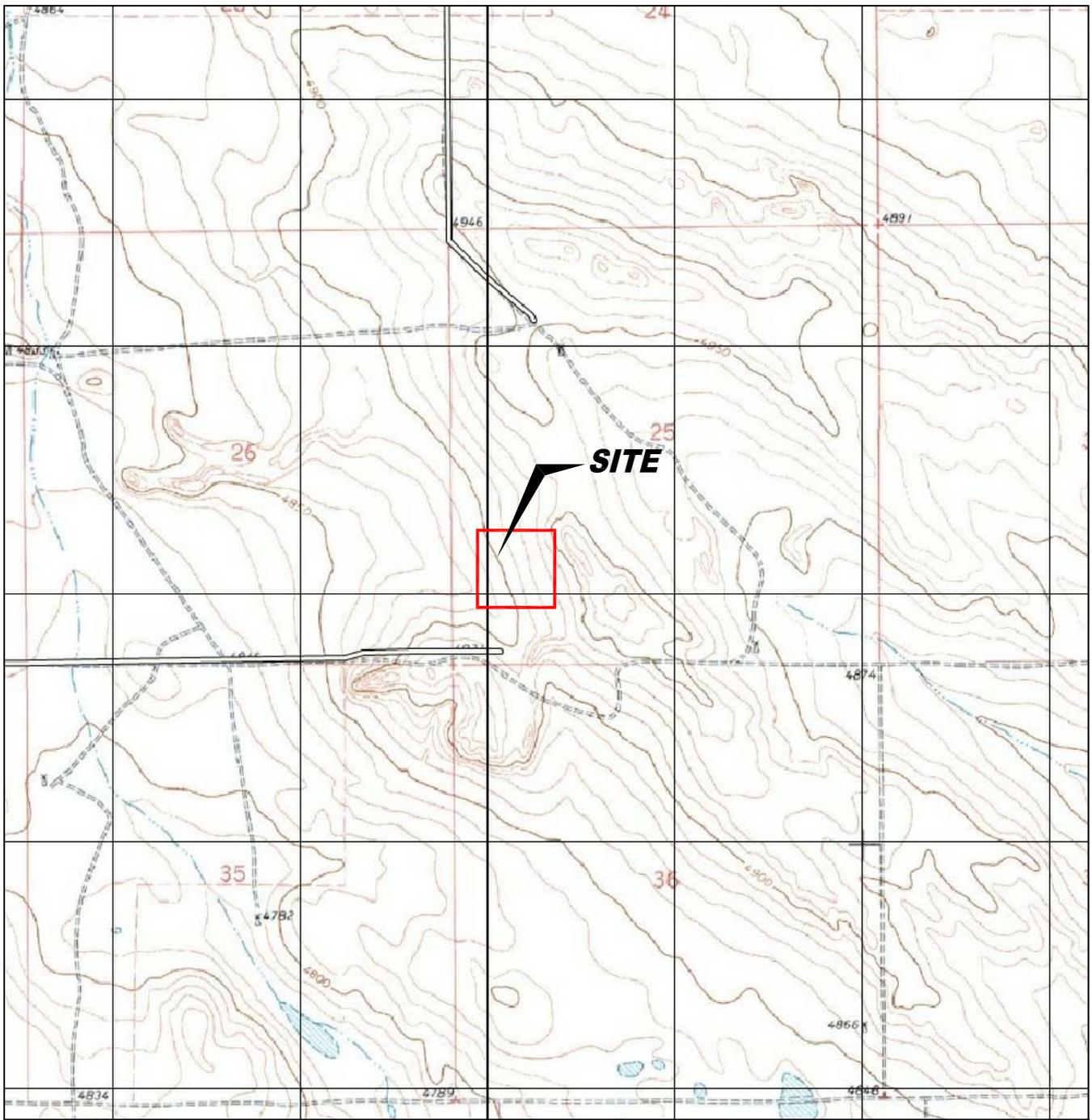
TABLE 1
SUMMARY OF SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
LC-25 ECONODE, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C020-001

Sample	Depth (ft)	Date Sampled	Location	Benzene mg/kg	Toluene mg/kg	Ethyl-Benzene mg/kg	Xylenes mg/kg	Naphthalene mg/kg	TPH GRO mg/kg	TPH DRO mg/kg	SAR (units)	pH (units)	EC mmhos/cm
N Wall 4 Ft	4	1/13/120	Wall	0.74	0.65	0.071	0.2	0.017	<50	<50	11.8	7.76	9.86
S Wall 4 Ft	4	1/13/120	Wall	0.23	0.15	0.015	0.048	0.012	<50	<50	14.3	8.05	9.46
E Wall 4 Ft	4	1/13/120	Wall	0.11	0.08	0.0086	0.028	0.012	<50	<50	12.8	8.35	7.56
W Wall 4 Ft	4	1/13/120	Wall	0.51	0.36	0.034	0.096	<0.010	<50	<50	8.52	7.76	7.6
Floor 4.5 Ft	4.5	1/13/120	Floor	0.4	0.24	0.016	0.047	<0.010	<50	<50	11.3	8.74	1.93
SS-01 4 Ft	4	1/21/2020	N Wall	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50	7.84	7.78	4.34
SS-02 4 Ft	4	1/21/2020	S Wall	0.014	<0.005	<0.005	<0.010	<0.010	<50	<50	3.30	8.15	1.97
SS-03 4 Ft	4	1/21/2020	E Wall	0.015	<0.005	<0.005	<0.010	<0.010	<50	<50	10.3	8.23	5.53
SS-04 4 Ft	4	1/21/2020	W Wall	0.018	0.0084	<0.005	<0.010	<0.010	<50	<50	2.30	7.84	4.56
FS-01 6 Ft	6	1/21/2020	Floor	<0.002	<0.005	<0.005	<0.010	<0.010	<50	<50	4.89	8.15	2.92
North 1 4 Ft	4	1/22/2020	Floor	NA	NA	NA	NA	NA	NA	NA	0.9	7.83	0.881
East 1 4 Ft	4	1/22/2020	Floor	NA	NA	NA	NA	NA	NA	NA	11.4	7.87	7.08
West 1 4 Ft	4	1/22/2020	Floor	NA	NA	NA	NA	NA	NA	NA	0.82	7.51	1.00
East 2 4 Ft	4	1/22/2020	Floor	NA	NA	NA	NA	NA	NA	NA	NA	8.0	3.4
COGCC Table 910 Limits				0.17	85	100	175	23	500	500	12	6 to 9	4

Bold faced values exceed the COGCC Table 910-1 concentrations

The sum of TPH-GRO andTPH-DRO must be <500 mg/kg

FIGURES



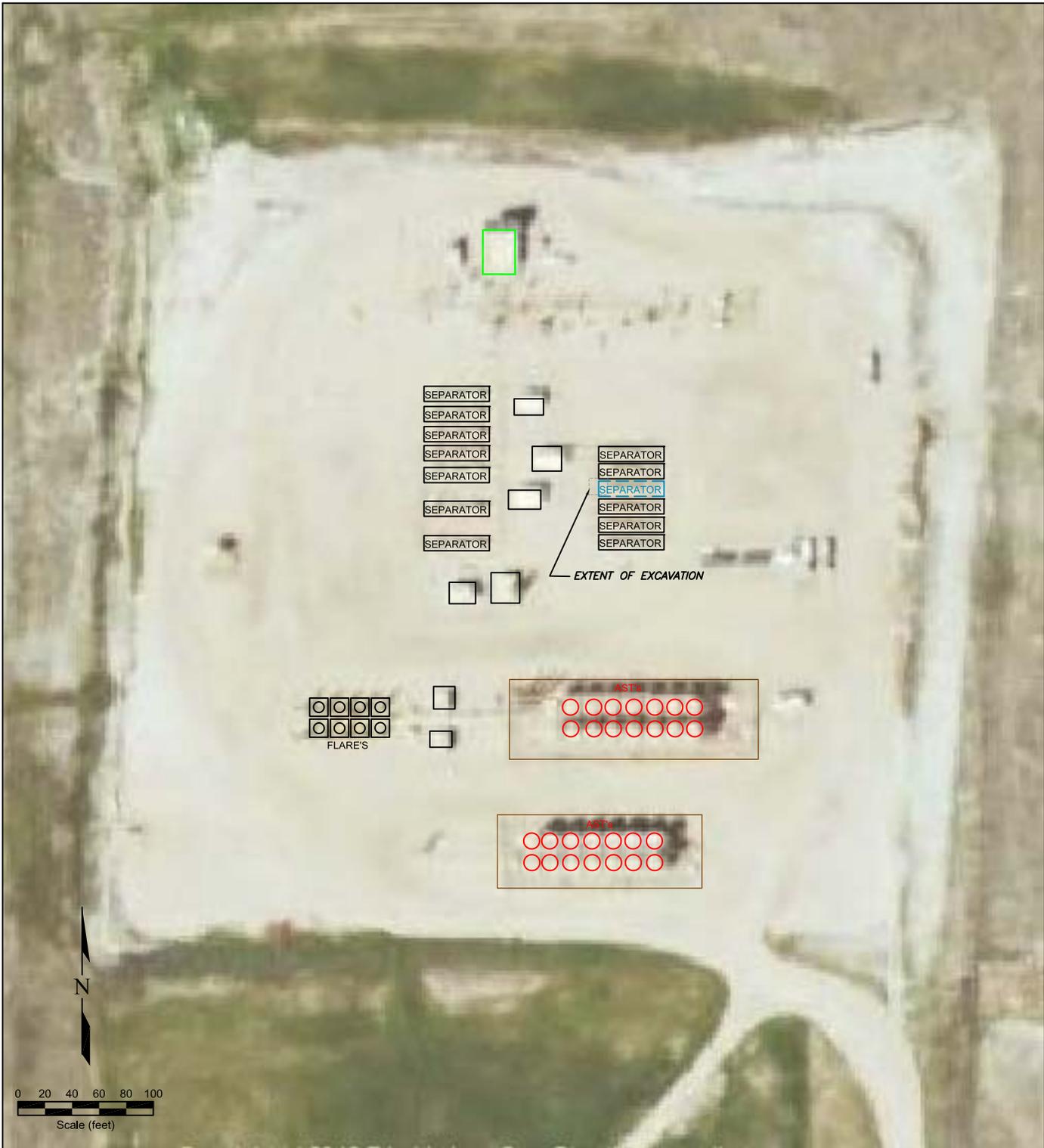
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY, INC. ~ LC-25 ECONODE
SWSW Section 25, T9N, R59W ~ 40.71774°, -103.93395°
Weld County, Colorado

Project No. CO20-001	Prepared by TDA	Drawn by TDA
Date 1/23/20	Reviewed by EB	Filename 20001T





LEGEND

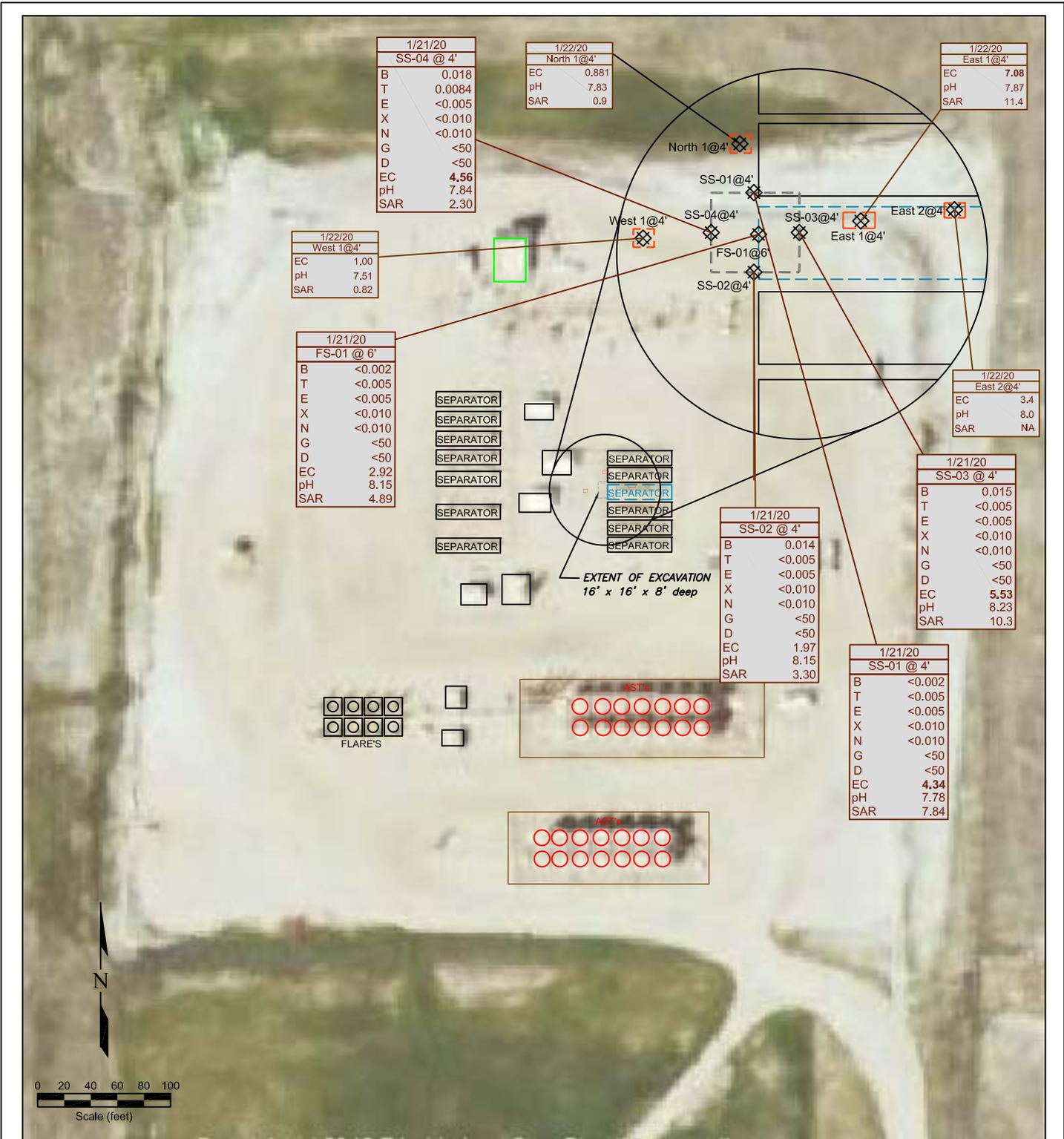
-  SOIL SAMPLE LOCATION
-  ABOVE GROUND STORAGE TANK
-  BUILDING
-  FORMER FACILITY
-  EXTENT OF EXCAVATION
-  CONTAINMENT WALL

**FIGURE 20
SITE MAP**

NOBLE ENERGY, INC. ~ LC-25 ECONODE
 SWSW Section 25, T9N, R59W ~ 40.71774°, -103.93395°
 Weld County, Colorado

Project No. CO20-001	Prepared by TDA	Drawn by TDA
Date 1/23/20	Reviewed by EB	Filename 20001T





LEGEND

	SOIL SAMPLE LOCATION	<table border="1"> <tr><td>1/21/20</td><td>DATE SAMPLED</td></tr> <tr><td>FS-01 @ 6'</td><td>LOCATION and DEPTH (ft)</td></tr> <tr><td>B <0.002</td><td>BENZENE (mg/kg)</td></tr> <tr><td>T <0.005</td><td>TOLUENE (mg/kg)</td></tr> <tr><td>E <0.005</td><td>ETHYLBENZENE (mg/kg)</td></tr> <tr><td>X <0.010</td><td>TOTAL XYLENES (mg/kg)</td></tr> <tr><td>N <0.010</td><td>NAPHTHALENE (mg/kg)</td></tr> <tr><td>G <50</td><td>TPH-GRO (mg/kg)</td></tr> <tr><td>D <50</td><td>TPH-DRO (mg/kg)</td></tr> <tr><td>EC 2.92</td><td>EC mmhos/cm</td></tr> <tr><td>pH 8.15</td><td>pH Units</td></tr> <tr><td>SAR 4.89</td><td>SAR Units</td></tr> </table>	1/21/20	DATE SAMPLED	FS-01 @ 6'	LOCATION and DEPTH (ft)	B <0.002	BENZENE (mg/kg)	T <0.005	TOLUENE (mg/kg)	E <0.005	ETHYLBENZENE (mg/kg)	X <0.010	TOTAL XYLENES (mg/kg)	N <0.010	NAPHTHALENE (mg/kg)	G <50	TPH-GRO (mg/kg)	D <50	TPH-DRO (mg/kg)	EC 2.92	EC mmhos/cm	pH 8.15	pH Units	SAR 4.89	SAR Units
1/21/20	DATE SAMPLED																									
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EC 2.92	EC mmhos/cm																									
pH 8.15	pH Units																									
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	TEST PIT LOCATION																									
	ABOVE GROUND STORAGE TANK																									
	BUILDING																									
	FORMER FACILITY																									
	EXTENT OF EXCAVATION CONTAINMENT WALL																									
<table border="1"> <tr><td>1/22/20</td><td>DATE SAMPLED</td></tr> <tr><td>North 1@4'</td><td>SAMPLE ID and DEPTH</td></tr> <tr><td>EC 0.881</td><td>EC mmhos/cm</td></tr> <tr><td>pH 7.83</td><td>pH Units</td></tr> <tr><td>SAR 0.9</td><td>SAR Units</td></tr> </table>	1/22/20	DATE SAMPLED	North 1@4'	SAMPLE ID and DEPTH	EC 0.881	EC mmhos/cm	pH 7.83	pH Units	SAR 0.9	SAR Units		<table border="1"> <tr><td>NA</td><td>NOT ANALYZED</td></tr> </table>	NA	NOT ANALYZED												
1/22/20	DATE SAMPLED																									
North 1@4'	SAMPLE ID and DEPTH																									
EC 0.881	EC mmhos/cm																									
pH 7.83	pH Units																									
SAR 0.9	SAR Units																									
NA	NOT ANALYZED																									

Figure 3
EXTENT OF EXCAVATION WITH
WITH SOIL CHEMISTRY MAP
 January 21, 2020; January 22, 2020
NOBLE ENERGY, INC. ~ LC-25 ECONODE
 SWSW Section 25, T9N, R59W ~ 40.71774°, -103.93395°
 Weld County, Colorado

Project No. CO20-001	Prepared by PH	Drawn by TDA	
Date 1/24/20	Reviewed by PH	Filename 20001T	

APPENDIX A

LABORATORY DOCUMENTATION

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 14, 2020

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - LC-25

Work Order #2001138

Enclosed are the results of analyses for samples received by Summit Scientific on 01/13/20 17:12. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Muri Premer". The signature is written in a cursive style with a large, stylized initial "M".

Muri Premer For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
N. WALL 4FT	2001138-01	Soil	01/12/20 00:00	01/13/20 17:12
S. WALL 4FT	2001138-02	Soil	01/12/20 00:00	01/13/20 17:12
E. WALL 4FT	2001138-03	Soil	01/12/20 00:00	01/13/20 17:12
W. WALL 4FT	2001138-04	Soil	01/12/20 00:00	01/13/20 17:12
FLOOR 4.5FT	2001138-05	Soil	01/12/20 00:00	01/13/20 17:12

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.

2001138

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Fremont Environmental	Project Manager: Paul Henehan
Address: P.O Box 1289	E-Mail: paulh@fremontenv.com, ethanb@fremontenv.com
City/State/Zip: Wellington, CO 80549	Bill to: <u>HOWARD</u>
Phone: 303-956-8714	Project Name: <u>NOBLE - LC-25</u>
Sampler Name:	Project Number:

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	Naphthalene	GRO	DRO	SAR	EC	pH			
1	N. WALL 4 FT	1/12/20		1			✓			✓				✓	✓	✓	✓	✓	✓			
2	S. WALL 4 FT																					
3	E. WALL 4 FT																					
4	W. WALL 4 FT																					
5	FLOOR 4.5 FT													✓	✓	✓	✓	✓	✓	✓		
6																						
7																						
8																						
9																						
10																						

Relinquished by: <u>[Signature]</u>	Date/Time: <u>1/12/19 17:00</u>	Received by: <u>[Signature]</u>	Date/Time: <u>01/13/2020 17:00</u>	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input checked="" type="checkbox"/> 72 hours <input type="checkbox"/>	TUESDAY AM PLZ.
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/> Standard <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
Sample Integrity:				Temperature Upon Receipt: <u>5.8</u>	
Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No					

Sample Receipt Checklist

S2 Work Order 2001138

Client: Fremont Environmental Client Project ID: Noble-LC-25

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

Matrix (check all that apply): Air X Soil/Solid Water Other: _____
(Describe)

Temp (°C)	5.8
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? <small>NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.</small>	X			
Were all samples received intact ⁽¹⁾ ?	X			
Was adequate sample volume provided ⁽¹⁾ ?	X			
If custody seals are present, are they intact ⁽¹⁾ ?			X	
Are samples with holding times due within 48 hours sample due within 48 hours present?	X			
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	X			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	X			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	X			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	X			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			X	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? <small>Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect</small>			X	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? <small>Record the pH in Comments.</small>			X	
If dissolved metals are requested, were samples field filtered?			X	
<u>Additional Comments (if any):</u> 				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

ES
Custodian Printed Name or Initials

[Signature]
Signature of Custodian

05/13/2020
Date/Time 1804



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

N. WALL 4FT
2001138-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.74	0.0020	mg/kg	1	2001186	01/13/20	01/13/20	EPA 8260B	
Toluene	0.65	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.071	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.20	0.010	"	"	"	"	"	"	
Naphthalene	0.017	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		92.1 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001187	01/13/20	01/13/20	EPA 8015M	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		90.1 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	10900	14.0	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B	
Magnesium	650	6.98	"	"	"	"	"	"	

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 - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

**N. WALL 4FT
 2001138-01 (Soil)**

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	4700	6.98	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B
---------------	-------------	------	-----------	---	---------	----------	----------	-----------

Calculated Analysis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.8	0.100	units	1	2001199	01/14/20	01/14/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	71.6		%	1	2001185	01/13/20	01/14/20	Calculation	
pH	7.76		pH Units	"	2001189	01/13/20	01/13/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	9.86	0.0100	mmhos/cm	1	2001188	"	01/13/20	EPA 120.1	

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 - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

S. WALL 4FT
2001138-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.23	0.0020	mg/kg	1	2001186	01/13/20	01/13/20	EPA 8260B	
Toluene	0.15	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.015	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.048	0.010	"	"	"	"	"	"	
Naphthalene	0.012	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		89.8 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		106 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001187	01/13/20	01/13/20	EPA 8015M	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.7 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	11100	13.6	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B	
Magnesium	522	6.80	"	"	"	"	"	"	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

**S. WALL 4FT
 2001138-02 (Soil)**

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	5680	6.80	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B
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Calculated Analysis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	14.3	0.100	units	1	2001199	01/14/20	01/14/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.5		%	1	2001185	01/13/20	01/14/20	Calculation	
pH	8.05		pH Units	"	2001189	01/13/20	01/13/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	9.46	0.0100	mmhos/cm	1	2001188	"	01/13/20	EPA 120.1	

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PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

E. WALL 4FT
2001138-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.11	0.0020	mg/kg	1	2001186	01/13/20	01/13/20	EPA 8260B	
Toluene	0.080	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.0086	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.028	0.010	"	"	"	"	"	"	
Naphthalene	0.012	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		87.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		111 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		107 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001187	01/13/20	01/13/20	EPA 8015M	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.4 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	12600	13.8	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B	
Magnesium	591	6.88	"	"	"	"	"	"	

Summit Scientific

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Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

**E. WALL 4FT
 2001138-03 (Soil)**

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	5420	6.88	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B
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Calculated Analysis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	12.8	0.100	units	1	2001199	01/14/20	01/14/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	72.7		%	1	2001185	01/13/20	01/14/20	Calculation	
pH	8.35		pH Units	"	2001189	01/13/20	01/13/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	7.56	0.0100	mmhos/cm	1	2001188	"	01/13/20	EPA 120.1	

Summit Scientific

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Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

W. WALL 4FT
2001138-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.51	0.0020	mg/kg	1	2001186	01/13/20	01/13/20	EPA 8260B	
Toluene	0.36	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.034	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.096	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		88.0 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		112 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001187	01/13/20	01/13/20	EPA 8015M	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		95.1 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	9890	14.0	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B	
Magnesium	566	7.00	"	"	"	"	"	"	

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Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

W. WALL 4FT
2001138-04 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	3220	7.00	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B
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Calculated Analysis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	8.52	0.100	units	1	2001199	01/14/20	01/14/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	71.4		%	1	2001185	01/13/20	01/14/20	Calculation	
pH	7.76		pH Units	"	2001189	01/13/20	01/13/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	7.60	0.0100	mmhos/cm	1	2001188	"	01/13/20	EPA 120.1	

Summit Scientific

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 PO Box 1289
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Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

FLOOR 4.5FT
2001138-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.40	0.0020	mg/kg	1	2001186	01/13/20	01/13/20	EPA 8260B	
Toluene	0.24	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.016	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.047	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		82.7 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		110 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001187	01/13/20	01/14/20	EPA 8015M	

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.8 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4290	13.5	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B	
Magnesium	279	6.77	"	"	"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

FLOOR 4.5FT
2001138-05 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	2820	6.77	mg/kg dry	1	2001190	01/13/20	01/14/20	EPA 6020B
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Calculated Analysis

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	11.3	0.100	units	1	2001199	01/14/20	01/14/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.9		%	1	2001185	01/13/20	01/14/20	Calculation	
pH	8.74		pH Units	"	2001189	01/13/20	01/13/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/12/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.93	0.0100	mmhos/cm	1	2001188	"	01/13/20	EPA 120.1	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2001186 - EPA 5030 Soil MS

Blank (2001186-BLK1)

Prepared: 01/13/20 Analyzed: 01/14/20

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
Naphthalene	ND	0.010	"								
Gasoline Range Hydrocarbons	ND	50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0390		"	0.0400		97.6	23-173				
Surrogate: Toluene-d8	0.0430		"	0.0400		108	20-170				
Surrogate: 4-Bromofluorobenzene	0.0405		"	0.0400		101	21-167				

LCS (2001186-BS1)

Prepared: 01/13/20 Analyzed: 01/14/20

Benzene	0.0870	0.0020	mg/kg	0.100		87.0	70-130				
Toluene	0.0950	0.0050	"	0.100		95.0	70-130				
Ethylbenzene	0.0735	0.0050	"	0.100		73.5	70-130				
m,p-Xylene	0.198	0.010	"	0.200		99.2	70-130				
o-Xylene	0.0725	0.0050	"	0.100		72.5	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0330		"	0.0400		82.6	23-173				
Surrogate: Toluene-d8	0.0412		"	0.0400		103	20-170				
Surrogate: 4-Bromofluorobenzene	0.0394		"	0.0400		98.6	21-167				

Matrix Spike (2001186-MS1)

Source: 2001137-01

Prepared: 01/13/20 Analyzed: 01/14/20

Benzene	0.0851	0.0020	mg/kg	0.100	ND	85.1	70-130				
Toluene	0.0932	0.0050	"	0.100	ND	93.2	70-130				
Ethylbenzene	0.0726	0.0050	"	0.100	ND	72.6	70-130				
m,p-Xylene	0.193	0.010	"	0.200	ND	96.7	70-130				
o-Xylene	0.0719	0.0050	"	0.100	ND	71.9	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0339		"	0.0400		84.8	23-173				
Surrogate: Toluene-d8	0.0407		"	0.0400		102	20-170				
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.2	21-167				

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2001186 - EPA 5030 Soil MS

Matrix Spike Dup (2001186-MSD1)

Source: 2001137-01

Prepared: 01/13/20 Analyzed: 01/14/20

Benzene	0.0886	0.0020	mg/kg	0.100	ND	88.6	70-130	3.94	30	
Toluene	0.0956	0.0050	"	0.100	ND	95.6	70-130	2.48	30	
Ethylbenzene	0.0726	0.0050	"	0.100	ND	72.6	70-130	0.0413	30	
m,p-Xylene	0.197	0.010	"	0.200	ND	98.5	70-130	1.84	30	
o-Xylene	0.0734	0.0050	"	0.100	ND	73.4	70-130	1.98	30	
Surrogate: 1,2-Dichloroethane-d4	0.0352		"	0.0400		88.0	23-173			
Surrogate: Toluene-d8	0.0414		"	0.0400		104	20-170			
Surrogate: 4-Bromofluorobenzene	0.0388		"	0.0400		96.9	21-167			

Summit Scientific

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Fremont Environmental
 PO Box 1289
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Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 2001187 - EPA 3550A

Blank (2001187-BLK1)

Prepared: 01/13/20 Analyzed: 01/14/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2001187-BS1)

Prepared: 01/13/20 Analyzed: 01/14/20

C10-C28 (DRO) 432 50 mg/kg 500 86.4 70-130

Matrix Spike (2001187-MS1)

Source: 2001137-01

Prepared: 01/13/20 Analyzed: 01/14/20

C10-C28 (DRO) 456 50 mg/kg 500 13.1 88.5 70-130

Matrix Spike Dup (2001187-MSD1)

Source: 2001137-01

Prepared: 01/13/20 Analyzed: 01/14/20

C10-C28 (DRO) 490 50 mg/kg 500 13.1 95.4 70-130 7.35 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control

Summit Scientific

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

Batch 2001190 - General Preparation

Blank (2001190-BLK1)

Prepared: 01/13/20 Analyzed: 01/14/20

Calcium	ND	10.0	mg/kg wet							
Magnesium	ND	5.00	"							
Sodium	ND	5.00	"							

LCS (2001190-BS1)

Prepared: 01/13/20 Analyzed: 01/14/20

Calcium	564	10.0	mg/kg wet	500		113	70-130			
Magnesium	632	5.00	"	500		126	70-130			
Sodium	592	5.00	"	500		118	70-130			

Duplicate (2001190-DUP1)

Source: 2001138-01

Prepared: 01/13/20 Analyzed: 01/14/20

Calcium	12400	14.0	mg/kg dry		10900			13.5	20	
Magnesium	703	6.98	"		650			7.88	20	
Sodium	5080	6.98	"		4700			7.68	20	

Matrix Spike (2001190-MS1)

Source: 2001138-01

Prepared: 01/13/20 Analyzed: 01/14/20

Calcium	11500	14.0	mg/kg dry	698	10900	92.2	70-130			
Magnesium	1460	6.98	"	698	650	116	70-130			
Sodium	5530	6.98	"	698	4700	119	70-130			

Matrix Spike Dup (2001190-MSD1)

Source: 2001138-01

Prepared: 01/13/20 Analyzed: 01/14/20

Calcium	11500	14.0	mg/kg dry	698	10900	95.9	70-130	0.223	25	
Magnesium	1500	6.98	"	698	650	122	70-130	2.88	25	
Sodium	5560	6.98	"	698	4700	123	70-130	0.550	25	

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

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

Summit Scientific

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

Batch 2001185 - General Preparation

Duplicate (2001185-DUP1)		Source: 2001137-01		Prepared: 01/13/20 Analyzed: 01/14/20		
% Solids	72.4		%		72.1	0.415 20

Batch 2001189 - General Preparation

LCS (2001189-BS1)				Prepared & Analyzed: 01/13/20	
pH	9.14		pH Units	9.18	99.6 95-105
Duplicate (2001189-DUP1)		Source: 2001138-01		Prepared & Analyzed: 01/13/20	
pH	7.68		pH Units	7.76	1.04 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/14/20 16:41

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 2001188 - General Preparation

Blank (2001188-BLK1)

Prepared & Analyzed: 01/13/20

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (2001188-BS1)

Prepared & Analyzed: 01/13/20

Specific Conductance (EC) 0.739 0.0100 mmhos/cm 0.750 98.5 90-110

Duplicate (2001188-DUP1)

Source: 2001138-01

Prepared & Analyzed: 01/13/20

Specific Conductance (EC) 10.1 0.0100 mmhos/cm 9.86 2.16 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/14/20 16:41

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 22, 2020

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - LC-25 Econode
Work Order #2001222

Enclosed are the results of analyses for samples received by Summit Scientific on 01/21/20 17:04. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Shrewsbury', written in a cursive style.

Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS-01 4FT	2001222-01	Soil	01/21/20 00:00	01/21/20 17:04
SS-02 4FT	2001222-02	Soil	01/21/20 00:00	01/21/20 17:04
SS-03 4FT	2001222-03	Soil	01/21/20 00:00	01/21/20 17:04
SS-04 4FT	2001222-04	Soil	01/21/20 00:00	01/21/20 17:04
FS-01 6FT	2001222-05	Soil	01/21/20 00:00	01/21/20 17:04

Summit Scientific

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Summit Scientific

S₂

2001222

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (f)

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address: P.O Box 1289

E-Mail: paulh@fremontenv.com, ethanb@fremontenv.com

City/State/Zip: Wellington, CO 80549

Bill to: Howard

Phone: 303-956-8714

Project Name: Noble - LC-25 Ecenode

Sampler Name: Black

Project Number:

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	Naphthalene	GRO	DRO	SAR	EC	pH		
1	SS-01 4 FT	1/21/20		1			X			X				X	X	X	X	X	X	X	
2	SS-02 4 FT			1																	
3	SS-03 4 FT			1																	
4	SS-04 4 FT			1																	
5	FS-01 6 FT			1																	
6																					
7																					
8																					
9																					
10																					

Relinquished by: Ethan Black	Date/Time: 1/21/20 1620	Received by: 	Date/Time: 01/21/2020 1620	Turn Around Time (Check): Same Day <input checked="" type="checkbox"/> 72 hours ___ 24 hours ___ Standard ___ 48 hours ___	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity: Temperature Upon Receipt: 3.6 Samples Intact: <input checked="" type="checkbox"/> Yes No	
Relinquished by:	Date/Time:	Received by:	Date/Time:		

Sample Receipt Checklist

S2 Work Order 2001222

Client: FREMONT ENVIRONMENTAL Client Project ID: NOBLE - LC - 25 ECONOCK

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

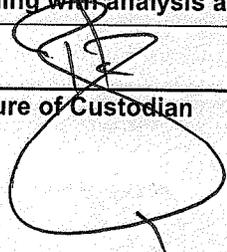
Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	3.6
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact ⁽¹⁾ ?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples with holding times due within 48 hours sample due within 48 hours present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

RZ
Custodian Printed Name or Initials


Signature of Custodian

1/21/20
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

SS-01 4FT
2001222-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	2001290	01/21/20	01/21/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		101 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		98.2 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.4 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001288	01/21/20	01/22/20	EPA 8015M	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		89.4 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	3250	15.5	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B	

Summit Scientific

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Fremont Environmental
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 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

SS-01 4FT
2001222-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Magnesium	507	7.74	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B	
Sodium	1820	7.74	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	7.84	0.100	units	1	2001292	01/22/20	01/22/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	64.6		%	1	2001287	01/21/20	01/22/20	Calculation	
pH	7.78		pH Units	"	2001286	01/21/20	01/21/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.34	0.0100	mmhos/cm	1	2001285	"	01/21/20	EPA 120.1	

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PO Box 1289
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Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

SS-02 4FT
2001222-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	0.014	0.0020	mg/kg	1	2001290	01/21/20	01/21/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		105 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.7 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	2001288	01/21/20	01/22/20	EPA 8015M	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		88.8 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	5450	13.2	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B	
Magnesium	362	6.61	"	"	"	"	"	"	

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Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

SS-02 4FT
2001222-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	933	6.61	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B
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Calculated Analysis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.30	0.100	units	1	2001292	01/22/20	01/22/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	75.7		%	1	2001287	01/21/20	01/22/20	Calculation	
pH	8.15		pH Units	"	2001286	01/21/20	01/21/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.97	0.0100	mmhos/cm	1	2001285	"	01/21/20	EPA 120.1	

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Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

SS-03 4FT
2001222-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	2001290	01/21/20	01/22/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.3 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		92.6 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001288	01/21/20	01/22/20	EPA 8015M	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.5 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	7520	13.9	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B	
Magnesium	979	6.93	"	"	"	"	"	"	

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 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

SS-03 4FT
2001222-03 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	3560	6.93	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B
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Calculated Analysis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	10.3	0.100	units	1	2001292	01/22/20	01/22/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	72.1		%	1	2001287	01/21/20	01/22/20	Calculation	
pH	8.23		pH Units	"	2001286	01/21/20	01/21/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	5.53	0.0100	mmhos/cm	1	2001285	"	01/21/20	EPA 120.1	

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PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

SS-04 4FT
2001222-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	0.015	0.0020	mg/kg	1	2001290	01/21/20	01/22/20	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.8 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.7 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	2001288	01/21/20	01/22/20	EPA 8015M	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl		91.2 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	3450	13.6	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B	
Magnesium	433	6.81	"	"	"	"	"	"	

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SS-04 4FT
2001222-04 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	539	6.81	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B
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Calculated Analysis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.30	0.100	units	1	2001292	01/22/20	01/22/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	73.4		%	1	2001287	01/21/20	01/22/20	Calculation	
pH	7.84		pH Units	"	2001286	01/21/20	01/21/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.56	0.0100	mmhos/cm	1	2001285	"	01/21/20	EPA 120.1	

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Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

FS-01 6FT
2001222-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.018	0.0020	mg/kg	1	2001290	01/21/20	01/22/20	EPA 8260B	
Toluene	0.0084	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
Naphthalene	ND	0.010	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	50	"	"	"	"	"	"	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		99.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		93.9 %	21-167		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	2001288	01/21/20	01/22/20	EPA 8015M	

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		92.7 %	30-150		"	"	"	"	

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4690	11.6	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B	
Magnesium	359	5.82	"	"	"	"	"	"	

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Fremont Environmental
 PO Box 1289
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Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

FS-01 6FT
2001222-05 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Sodium	1290	5.82	mg/kg dry	1	2001289	01/21/20	01/21/20	EPA 6020B
---------------	-------------	------	-----------	---	---------	----------	----------	-----------

Calculated Analysis

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.89	0.100	units	1	2001292	01/22/20	01/22/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.9		%	1	2001287	01/21/20	01/22/20	Calculation	
pH	8.15		pH Units	"	2001286	01/21/20	01/21/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/21/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	2.92	0.0100	mmhos/cm	1	2001285	"	01/21/20	EPA 120.1	

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 - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2001290 - EPA 5030 Soil MS

Blank (2001290-BLK1)

Prepared & Analyzed: 01/21/20

Benzene	ND	0.0020	mg/kg								
Toluene	ND	0.0050	"								
Ethylbenzene	ND	0.0050	"								
Xylenes (total)	ND	0.010	"								
Naphthalene	ND	0.010	"								
Gasoline Range Hydrocarbons	ND	50	"								
Surrogate: 1,2-Dichloroethane-d4	0.0393		"	0.0400		98.2	23-173				
Surrogate: Toluene-d8	0.0399		"	0.0400		99.8	20-170				
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	21-167				

LCS (2001290-BS1)

Prepared & Analyzed: 01/21/20

Benzene	0.0963	0.0020	mg/kg	0.100		96.3	70-130				
Toluene	0.0794	0.0050	"	0.100		79.4	70-130				
Ethylbenzene	0.0885	0.0050	"	0.100		88.5	70-130				
m,p-Xylene	0.177	0.010	"	0.200		88.4	70-130				
o-Xylene	0.0852	0.0050	"	0.100		85.2	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0390		"	0.0400		97.4	23-173				
Surrogate: Toluene-d8	0.0394		"	0.0400		98.6	20-170				
Surrogate: 4-Bromofluorobenzene	0.0379		"	0.0400		94.7	21-167				

Matrix Spike (2001290-MS1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

Benzene	0.0991	0.0020	mg/kg	0.100	ND	99.1	70-130				
Toluene	0.0836	0.0050	"	0.100	ND	83.6	70-130				
Ethylbenzene	0.0929	0.0050	"	0.100	ND	92.9	70-130				
m,p-Xylene	0.187	0.010	"	0.200	0.00429	91.2	70-130				
o-Xylene	0.0913	0.0050	"	0.100	ND	91.3	70-130				
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0400		97.3	23-173				
Surrogate: Toluene-d8	0.0397		"	0.0400		99.2	20-170				
Surrogate: 4-Bromofluorobenzene	0.0382		"	0.0400		95.6	21-167				

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch 2001290 - EPA 5030 Soil MS

Matrix Spike Dup (2001290-MSD1)	Source: 2001220-01			Prepared & Analyzed: 01/21/20						
Benzene	0.0971	0.0020	mg/kg	0.100	ND	97.1	70-130	2.02	30	
Toluene	0.0834	0.0050	"	0.100	ND	83.4	70-130	0.323	30	
Ethylbenzene	0.0901	0.0050	"	0.100	ND	90.1	70-130	3.08	30	
m,p-Xylene	0.181	0.010	"	0.200	0.00429	88.4	70-130	3.02	30	
o-Xylene	0.0886	0.0050	"	0.100	ND	88.6	70-130	2.97	30	
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0400		103	23-173			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	20-170			
Surrogate: 4-Bromofluorobenzene	0.0373		"	0.0400		93.3	21-167			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch 2001288 - EPA 3550A

Blank (2001288-BLK1)

Prepared & Analyzed: 01/21/20

C10-C28 (DRO) ND 50 mg/kg

LCS (2001288-BS1)

Prepared & Analyzed: 01/21/20

C10-C28 (DRO) 522 50 mg/kg 500 104 70-130

Matrix Spike (2001288-MS1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

C10-C28 (DRO) 485 50 mg/kg 500 14.5 94.2 70-130

Matrix Spike Dup (2001288-MSD1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

C10-C28 (DRO) 477 50 mg/kg 500 14.5 92.5 70-130 1.70 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control

Summit Scientific

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

Batch 2001289 - General Preparation

Blank (2001289-BLK1)

Prepared & Analyzed: 01/21/20

Calcium	ND	10.0	mg/kg wet							
Magnesium	ND	5.00	"							
Sodium	ND	5.00	"							

LCS (2001289-BS1)

Prepared & Analyzed: 01/21/20

Calcium	566	10.0	mg/kg wet	500		113	70-130			
Magnesium	613	5.00	"	500		123	70-130			
Sodium	566	5.00	"	500		113	70-130			

Duplicate (2001289-DUP1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

Calcium	7780	13.6	mg/kg dry		7800			0.266	20	
Magnesium	1260	6.80	"		1500			17.7	20	
Sodium	1370	6.80	"		1450			6.17	20	

Matrix Spike (2001289-MS1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

Calcium	8550	13.6	mg/kg dry	680	7800	109	70-130			
Magnesium	2040	6.80	"	680	1500	78.7	70-130			
Sodium	2040	6.80	"	680	1450	85.9	70-130			

Matrix Spike Dup (2001289-MSD1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

Calcium	8450	13.6	mg/kg dry	680	7800	94.2	70-130	1.18	25	
Magnesium	2040	6.80	"	680	1500	78.9	70-130	0.0395	25	
Sodium	2120	6.80	"	680	1450	98.6	70-130	4.17	25	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

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

Summit Scientific

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

Batch 2001286 - General Preparation

LCS (2001286-BS1)

Prepared & Analyzed: 01/21/20

pH 9.22 pH Units 9.18 100 95-105

Duplicate (2001286-DUP1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

pH 8.96 pH Units 8.92 0.447 20

Batch 2001287 - General Preparation

Duplicate (2001287-DUP1)

Source: 2001220-01

Prepared: 01/21/20 Analyzed: 01/22/20

% Solids 83.4 % 73.5 12.6 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 01/22/20 06:29

Specific Conductance by EPA Method 120.1 - Quality Control

Summit Scientific

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

Batch 2001285 - General Preparation

Blank (2001285-BLK1)

Prepared & Analyzed: 01/21/20

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (2001285-BS1)

Prepared & Analyzed: 01/21/20

Specific Conductance (EC) 0.814 0.0100 mmhos/cm 0.750 108 90-110

Duplicate (2001285-DUP1)

Source: 2001220-01

Prepared & Analyzed: 01/21/20

Specific Conductance (EC) 1.27 0.0100 mmhos/cm 1.27 0.158 20

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/22/20 06:29

Notes and Definitions

DET Analyte DETECTED
ND Analyte NOT DETECTED at or above the reporting limit
NR Not Reported
dry Sample results reported on a dry weight basis
RPD Relative Percent Difference

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 03, 2020

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - LC-25 Econode
Work Order #2001241

Enclosed are the results of analyses for samples received by Summit Scientific on 01/22/20 16:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/03/20 07:04

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NORTH 1 4FT	2001241-01	Soil	01/22/20 00:00	01/22/20 16:46
EAST 1 4FT	2001241-02	Soil	01/22/20 00:00	01/22/20 16:46
WEST 1 4FT	2001241-03	Soil	01/22/20 00:00	01/22/20 16:46
EAST 2 4FT	2001241-05	Soil	01/22/20 00:00	01/22/20 16:46

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.

2001241

Summit Scientific

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
 303-277-9310 ♦ 303-374-5933 (f)

Client: Fremont Environmental	Project Manager: Paul Henehan
Address: P.O Box 1289	E-Mail: paulh@fremontenv.com, ethanb@fremontenv.com
City/State/Zip: Wellington, CO 80549	Bill to: Howard
Phone: 303-956-8714	Project Name: Noble - LC-25 Econode
Sampler Name: Black	Project Number:

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	Naphthalene	GRO	DRO	SAR	EC	pH	
1	North 1 4FT	1/22/20		1			X			X							X	X	X	
2	East 1 4FT	I		I													I	I	I	
3	West 1 4FT	I		I													I	I	I	
4	North 2 4FT	I		I													I	I	I	HOLD
5	East 2 4FT	I		I													I	I	I	HOLD
6	West 2 4FT	I		I													I	I	I	HOLD
7																				
8																				
9																				
10																				

Relinquished by: Ethan Black	Date/Time: 1/22/20 1646	Received by: [Signature]	Date/Time: 01-22-2020 16:46	Turn Around Time (Check)	Notes:
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day <input checked="" type="checkbox"/>	Please hold ID 4,5,6 until ID 1,2,3 are reviewed.
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours <input type="checkbox"/>	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours <input type="checkbox"/>	
				Sample Integrity:	
				Temperature Upon Receipt: 4.4	
				Samples Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

Sample Receipt Checklist

S2 Work Order 2001241

Client: Fremont/ Noble Client Project ID: LC-25 ELGNODE

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

Matrix (check all that apply): Air Soil/Solid Water Other: _____
(Describe)

Temp (°C)	4.4
-----------	-----

Thermometer ID: 61857155-K

	Yes	No	N/A	Comments (if any)
If samples require cooling, was the temperature at 4°C +/- 2°C ⁽¹⁾ ? NOTE: If samples are delivered the same day of sampling, this requirement is met provided that there is evidence that cooling has begun.	✓			On Ice
Were all samples received intact ⁽¹⁾ ?	✓			
Was adequate sample volume provided ⁽¹⁾ ?	✓			
If custody seals are present, are they intact ⁽¹⁾ ?			✓	
Are samples with holding times due within 48 hours sample due within 48 hours present?	✓			Same Day TAT
Is a chain-of-custody (COC) form present and filled out completely ⁽¹⁾ ?	✓			
Does the COC agree with the number and type of sample bottles received ⁽¹⁾ ?	✓			
Do the sample IDs on the bottle labels match the COC ⁽¹⁾ ?	✓			
Is the COC properly relinquished by the client w/ date and time recorded ⁽¹⁾ ?	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling) ⁽¹⁾ ? Note the type of preservative in the Comments column – HCl, H2SO4, NaOH, HNO3, ect			✓	
If samples are acid preserved for metals, is the pH ≤ 2 ⁽¹⁾ ? Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	

Additional Comments (if any):

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

MP
Custodian Printed Name or Initials

Muri Premier
Signature of Custodian

1/22/20
Date/Time



Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/03/20 07:04

NORTH 1 4FT
2001241-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	9210	13.4	mg/kg dry	1	2001300	01/22/20	01/22/20	EPA 6020B	
Magnesium	1430	6.69	"	"	"	"	"	"	
Sodium	350	6.69	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.900	0.100	units	1	2001318	01/23/20	01/23/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	74.7		%	1	2001312	01/22/20	01/23/20	Calculation	
pH	7.83		pH Units	"	2001311	01/22/20	01/22/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	0.881	0.0100	mmhos/cm	1	2001310	01/22/20	01/22/20	EPA 120.1	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/03/20 07:04

EAST 1 4FT
2001241-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	8200	12.9	mg/kg dry	1	2001300	01/22/20	01/22/20	EPA 6020B	
Magnesium	1900	6.47	"	"	"	"	"	"	
Sodium	4390	6.47	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	11.4	0.100	units	1	2001318	01/23/20	01/23/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	77.3		%	1	2001312	01/22/20	01/23/20	Calculation	
pH	7.87		pH Units	"	2001311	01/22/20	01/22/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	7.08	0.0100	mmhos/cm	1	2001310	01/22/20	01/22/20	EPA 120.1	

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 - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/03/20 07:04

WEST 1 4FT
2001241-03 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Calcium	14900	13.7	mg/kg dry	1	2001300	01/22/20	01/22/20	EPA 6020B	
Magnesium	1140	6.87	"	"	"	"	"	"	
Sodium	384	6.87	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Sodium Adsorption Ratio	0.820	0.100	units	1	2001318	01/23/20	01/23/20	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
% Solids	72.8		%	1	2001312	01/22/20	01/23/20	Calculation	
pH	7.51		pH Units	"	2001311	01/22/20	01/22/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Specific Conductance (EC)	1.00	0.0100	mmhos/cm	1	2001310	01/22/20	01/22/20	EPA 120.1	

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 - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/03/20 07:04

EAST 2 4FT
2001241-05 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	2001320	01/23/20	01/23/20	EPA 9045D	

Specific Conductance by EPA Method 120.1

Date Sampled: **01/22/20 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	3.40	0.0100	mmhos/cm	1	2001317	01/23/20	01/23/20	EPA 120.1	

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 - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/03/20 07:04

Soluble Nutrients by EPA 6020/USDA60 6(2, 3A) - Dry Weight Basis - Quality Control

Summit Scientific

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

Batch 2001300 - General Preparation

Blank (2001300-BLK1)

Prepared & Analyzed: 01/22/20

Calcium	ND	10.0	mg/kg wet						
Magnesium	ND	5.00	"						
Sodium	ND	5.00	"						

LCS (2001300-BS1)

Prepared & Analyzed: 01/22/20

Calcium	593	10.0	mg/kg wet	500	119	70-130			
Magnesium	629	5.00	"	500	126	70-130			
Sodium	595	5.00	"	500	119	70-130			

Duplicate (2001300-DUP1)

Source: 2001237-01

Prepared & Analyzed: 01/22/20

Calcium	2630	10.9	mg/kg dry	2520			4.33	20	
Magnesium	520	5.45	"	507			2.70	20	
Sodium	441	5.45	"	422			4.40	20	

Matrix Spike (2001300-MS1)

Source: 2001237-01

Prepared & Analyzed: 01/22/20

Calcium	3100	10.9	mg/kg dry	545	2520	107	70-130		
Magnesium	1140	5.45	"	545	507	116	70-130		
Sodium	1040	5.45	"	545	422	114	70-130		

Matrix Spike Dup (2001300-MSD1)

Source: 2001237-01

Prepared & Analyzed: 01/22/20

Calcium	3220	10.9	mg/kg dry	545	2520	129	70-130	3.83	25
Magnesium	1120	5.45	"	545	507	112	70-130	1.86	25
Sodium	995	5.45	"	545	422	105	70-130	4.63	25

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/03/20 07:04

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

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

Batch 2001311 - General Preparation

LCS (2001311-BS1)											
											Prepared & Analyzed: 01/22/20
pH	9.17		pH Units	9.18		99.9	95-105				
Duplicate (2001311-DUP1)											
											Prepared & Analyzed: 01/22/20
pH	7.72		pH Units			7.83			1.41	20	

Batch 2001312 - General Preparation

Duplicate (2001312-DUP1)											
											Prepared: 01/22/20 Analyzed: 01/23/20
% Solids	72.6		%			74.7			2.85	20	

Batch 2001320 - General Preparation

LCS (2001320-BS1)											
											Prepared & Analyzed: 01/23/20
pH	9.21		pH Units	9.18		100	95-105				
Duplicate (2001320-DUP1)											
											Prepared & Analyzed: 01/23/20
pH	6.57		pH Units			6.59			0.304	20	

Summit Scientific

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Project: Noble - LC-25 Econode

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 02/03/20 07:04

Specific Conductance by EPA Method 120.1 - Quality Control
Summit Scientific

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

Batch 2001310 - General Preparation

Blank (2001310-BLK1)

Prepared & Analyzed: 01/22/20

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (2001310-BS1)

Prepared & Analyzed: 01/22/20

Specific Conductance (EC) 0.784 0.0100 mmhos/cm 0.750 105 90-110

Duplicate (2001310-DUP1)

Source: 2001241-01

Prepared & Analyzed: 01/22/20

Specific Conductance (EC) 0.751 0.0100 mmhos/cm 0.881 16.0 20

Batch 2001317 - General Preparation

Blank (2001317-BLK1)

Prepared & Analyzed: 01/23/20

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (2001317-BS1)

Prepared & Analyzed: 01/23/20

Specific Conductance (EC) 0.775 0.0100 mmhos/cm 0.750 103 90-110

Duplicate (2001317-DUP1)

Source: 2001234-01

Prepared & Analyzed: 01/23/20

Specific Conductance (EC) 0.171 0.0100 mmhos/cm 0.171 0.293 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - LC-25 Econode

Project Number: [none]
Project Manager: Paul Henchan

Reported:
02/03/20 07:04

Notes and Definitions

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