

FREMONT ENVIRONMENTAL INC.

April 12, 2023

Mr. Daniel Peterson
Noble Energy Inc.
2115 117th Avenue
Greeley, CO 80634

Subject: **Flowline Closure Data Submittal**
Parker 29-34
API # 05-123-20684
SWSE Sec. 29, T2N, R64W
Weld County, Colorado
Fremont Project No. C023-104
Facility # 262080, Remediation #26176

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Flowline Closure activities for the Noble Energy Inc. (Noble) Parker 29-34. Impacted soil was not encountered during abandonment activities. Details of the Parker 29-34 flowline closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (303) 956-8714 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Paul V. Henchan, P.E.
Senior Consultant

Attachments:

Facility Closure Checklist
Tables
Figures
Photos
Laboratory Reports

**1759 REDWING LANE, BROOMFIELD, CO 80020
(303) 956-8714 (DIRECT)**

Flowline Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional Attachments:		Tank Battery Closure		Wellhead Closure		Pit Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number: Baumgartner-62N64W 29SWSW Facility: 305210		Date: 04/10/2023-04/12/2023						Remediation Project #: 26176
Associated Wells: Parker 29-34 Facility ID: 262080 API: 05-123-20684		Age of Site: 2002						Number of Photos Attached: 14 Photos
Starting point: (GPS coordinates and descriptions) 40.104941, -104.573197								
End point: (GPS coordinates and descriptions) 40.106079, -104.583962								
USCS Soil Type: SC					Estimated Depth to Groundwater: N/A			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
None observed								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
None observed								
Flowlines								
Flowline type	2" Steel							
Depth	Roughly 3ft							
Age	2002							
Length	3,075ft							
Construction Material	YL Jacket /GN FBE							
Were flowlines pulled?	Yes							
Visual Integrity of lines	No Damage							
Visual impacts if trenched	N/A							
PID Readings if trenched	High @ 1.3ppm							
Sample taken? Location/Sample ID#	FL01@4.0' FL08@4.0' FL09@5.0' FL15@3.5'							
Photo Number(s)	Photo 1A-1N							
Other observations regarding on loction flowlines: Construction material change discovered at FL08@4.0'. Flowline went from yellow jacket coating to green FBE coating. Samples collected at that location and were submitted for lab analysis.								
Summary								
Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards								
Total number of samples field screened: 11 samples					Total number of samples collected: 15 samples			
Highest PID Reading: High @ 1.3ppm (FL08@4.0')					Total number of samples submitted to lab for analysis: 4 Samples			
If more than 10 cubic yards of impacted soil were observed:								
Vertical extent: N/A					Estimated spill volume: N/A			
Lateral extent: N/A					Volume of soil removed: N/A			
Is additional investigation required? N/A								
Was groundwater encountered during the investigation? No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils								
Measured depth to groundwater: N/A					Was remedial groundwater removal conducted? Yes No			
Date Groundwater was encountered: N/A					Commencement date of removal: N/A			
Sheen on groundwater? Yes No					Volume of groundwater removed prior to sampling: N/A			
Free product observed? Yes No					Volume of groundwater removed post sampling: N/A			
Total number of samples collected: N/A					Total Volume of groundwater removed: N/A			
Total number of samples submitted to lab for analysis: N/A								

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
PARKER 29-34, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-104

Sample ID	Sample Date	Depth (ft)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-Benzene (mg/kg)	Xylenes (mg/kg)	1,2,4- Trimethyl- Benzene (mg/kg)	1,3,5- Trimethyl- Benzene (mg/kg)	Naphthalene (mg/kg)	TPH GRO (mg/kg)	TPH DRO (mg/kg)	TPH ORO (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500		
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500		
FL01@4.0'	4/10/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
FL08@4.0'	4/10/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
FL09@5.0'	4/12/2023	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
FL15@3.5'	4/12/2023	3.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

* Summation of GRO+DRO+ORO must be less than 500 mg/kg

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
PARKER 29-34, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-104

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
FL01@4.0'	4/10/2023	4.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL08@4.0'	4/10/2023	4.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL09@5.0'	4/12/2023	5.0 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
FL15@3.5'	4/12/2023	3.5 Ft	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the COGCC Table 915-1 concentrations
Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

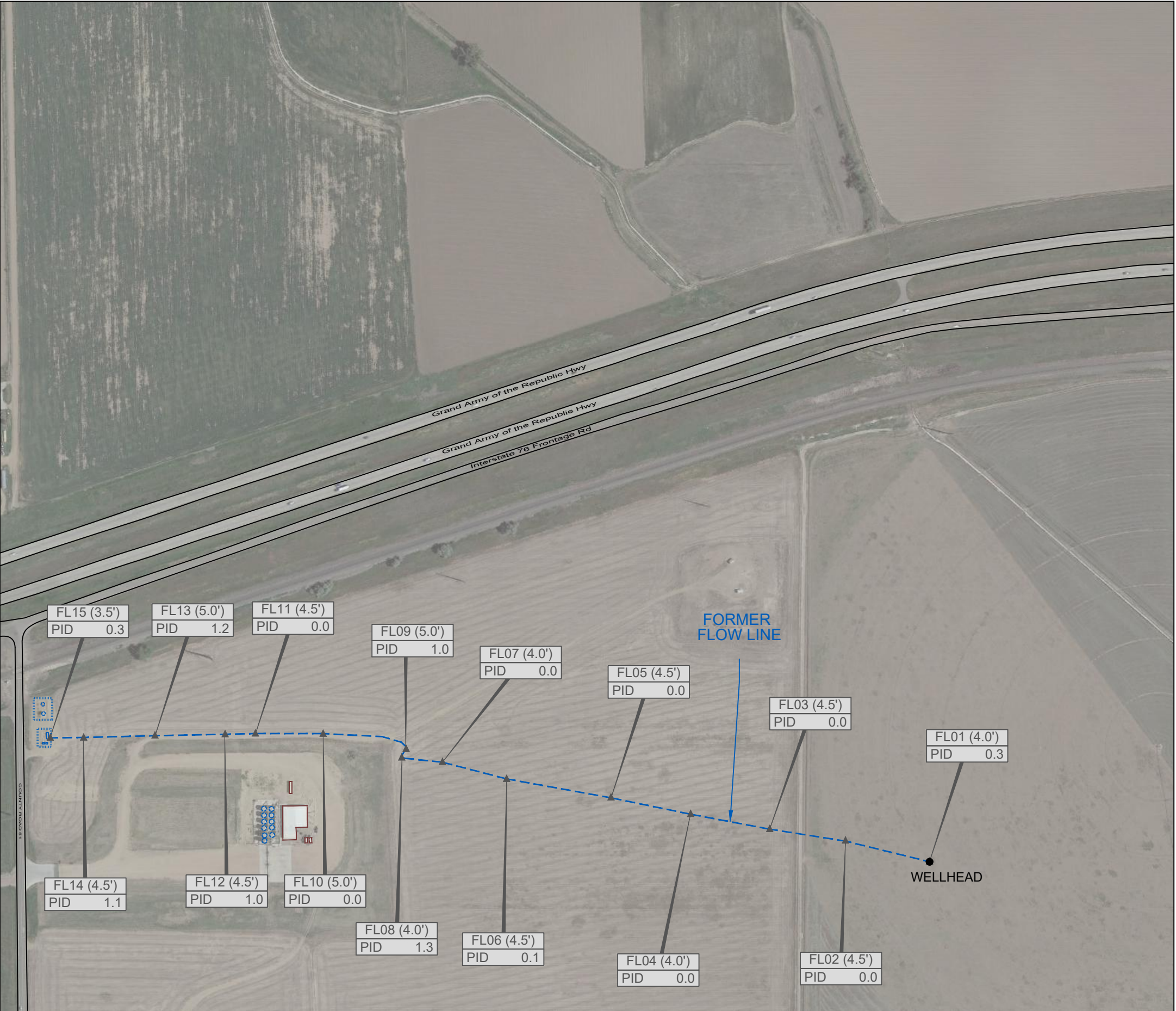
TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
PARKER 29-34, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-104

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
COGCC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
FL01@4.0'	4/10/2023	4.0 Ft	8.00	0.452	2.12	0.136
FL08@4.0'	4/10/2023	4.0 Ft	7.81	0.580	3.21	0.274
FL09@5.0'	4/12/2023	5.0 Ft	7.82	1.12	3.97	0.306
FL15@3.5'	4/12/2023	3.5 Ft	7.98	0.324	1.66	0.168

Bold faced values exceed the COGCC Table 915-1 concentrations

Yellow highlighted 915-1 Limits indicate the referenced soil screening level (SSL)





LEGEND

- WELLHEAD LOCATION
 - ▲ PID READING LOCATION
 - ABOVE GROUND STORAGE TANK
 - BUILDING BUILDING
 - FORMER FACILITY
 - FENCE LINE
 - CONTAINMENT BERM
 - FLOW LINE
- | | |
|------|---------|
| FL01 | PID 0.1 |
|------|---------|
- PID READING LOCATION IDENTIFICATION
PHOTO IONIZATION DETECTION (ppm)

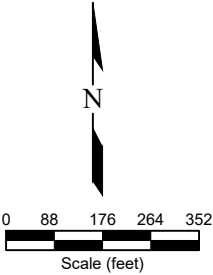
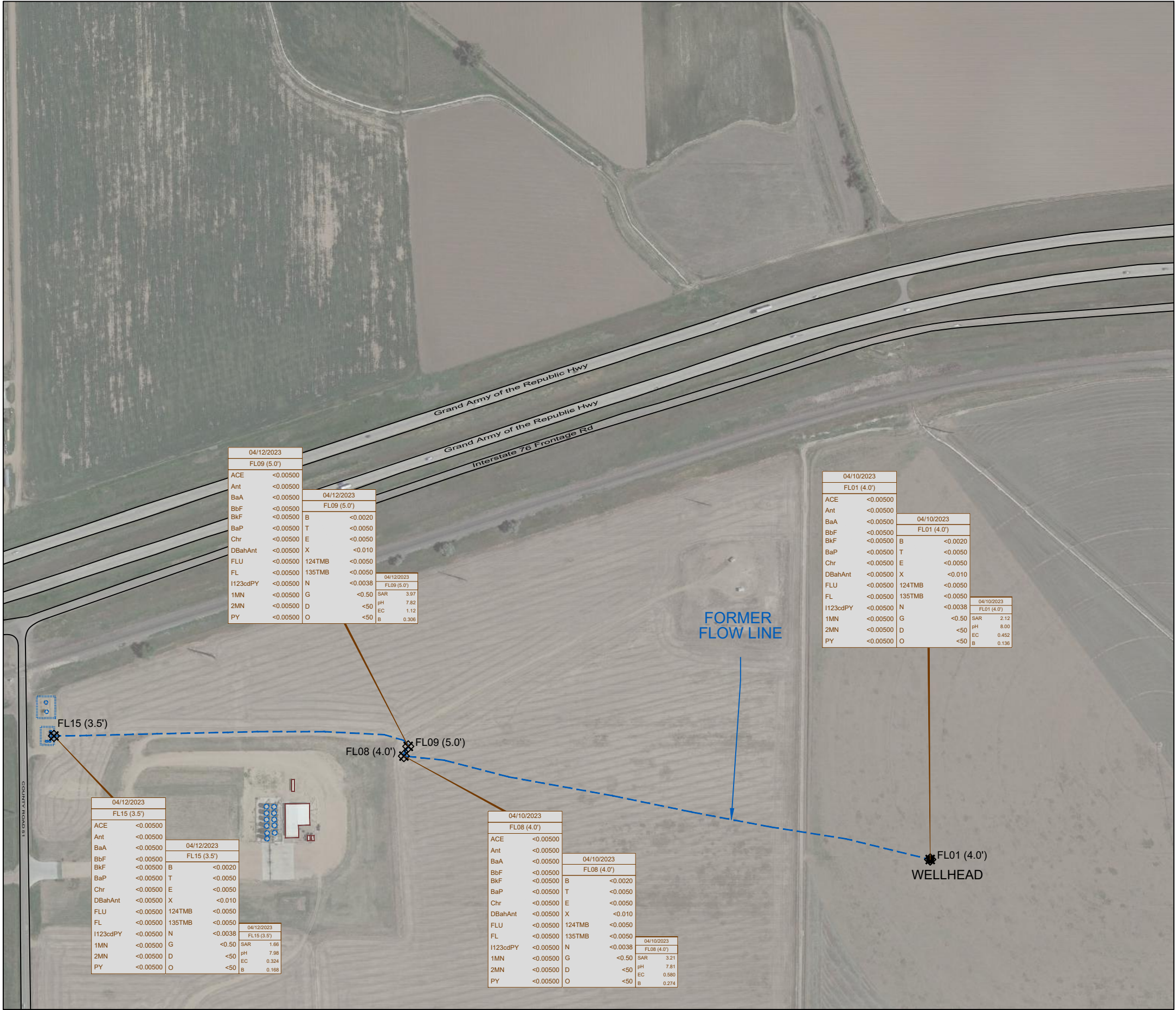


Figure 2
SITE MAP

NOBLE ENERGY INC - PARKER 29-34
SWSE Sec. 29, T2N, R64W, 6th PM
Weld County, Colorado
40.104950°, -104.573210°

Project # CO23-104	API # 05-123-20684	Facility # 262080
Date 10/17/2023	Remediation # 26176	Filename 23104Q





LEGEND

- WELLHEAD LOCATION
- ⊠ SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- ▭ BUILDING
- ▭ FORMER FACILITY
- FENCE LINE
- | | | | | CONTAINMENT BERM
- - - FLOW LINE

4/7/2023		DATE SAMPLED
FL01 (4')		SAMPLE ID and DEPTH (ft)
ACE	<0.00500	ACENAPHTHENE (mg/kg)
Ant	<0.00500	ANTHRACENE (mg/kg)
BaA	<0.00500	BENZO (A) ANTHRACENE (mg/kg)
BbF	<0.00500	BENZO (B) FLUORANTHENE (mg/kg)
BkF	<0.00500	BENZO (K) FLUORANTHENE(mg/kg)
BaP	<0.00500	BENZO (A) PYRENE (mg/kg)
Chr	<0.00500	CHRYSENE (mg/kg)
DBahAnt	<0.00500	DIBENZ (A,H) ANTHRACENE (mg/kg)
FLU	<0.00500	FLUORANTHENE (mg/kg)
FL	<0.00500	FLUORENE (mg/kg)
I123cdPY	<0.00500	INDENO (1,2,3-CD) PYRENE(mg/kg)
1MN	<0.00500	1-METHYLNAPHTHALENE (mg/kg)
2MN	<0.00500	2-METHYLNAPHTHALENE (mg/kg)
PY	<0.00500	PYRENE (mg/kg)

4/7/2023		DATE SAMPLED
FL01 (4')		SAMPLE ID & DEPTH (ft)
SAR	0.950	SAR (units)
pH	8.04	pH (pH units)
EC	0.385	EC (mmhos/cm)
B	0.270	BORON (mg/L)

4/7/2023		DATE SAMPLED
FL01 (4')		SAMPLE ID and DEPTH (ft)
B	<0.0020	BENZENE (mg/kg)
T	<0.0050	TOLUENE (mg/kg)
E	<0.0050	ETHYLBENZENE (mg/kg)
X	<0.010	TOTAL XYLENES (mg/kg)
124TMB	<0.0050	1,2,4-TRIMETHYLBENZENE (mg/kg)
135TMB	<0.0050	1,3,5-TRIMETHYLBENZENE (mg/kg)
N	<0.0038	NAPHTHALENE (mg/kg)
G	<0.50	TPH-GRO (mg/kg)
D	<50	TPH-DRO (mg/kg)
O	<50	TPH-ORO (mg/kg)

4/10/2023		DATE SAMPLED
FL01 (4.0')		SAMPLE ID & DEPTH (ft)
B	<0.0020	BENZENE (mg/kg)
T	<0.0050	TOLUENE (mg/kg)
E	<0.0050	ETHYLBENZENE (mg/kg)
X	<0.010	TOTAL XYLENES (mg/kg)
124TMB	<0.0050	1,2,4-TRIMETHYLBENZENE (mg/kg)
135TMB	<0.0050	1,3,5-TRIMETHYLBENZENE (mg/kg)
N	<0.0038	NAPHTHALENE (mg/kg)
G	<0.50	TPH-GRO (mg/kg)
D	<50	TPH-DRO (mg/kg)
O	<50	TPH-ORO (mg/kg)

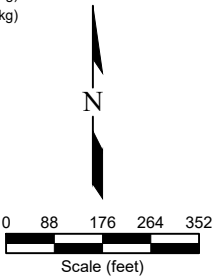


Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY INC - PARKER 29-34
SWSE Sec. 29, T2N, R64W, 6th PM
Weld County, Colorado
40.104950°, -104.573210°

Project #	API #	Facility #
CO23-104	05-123-20684	262080
Date	Remediation #	Filename
10/17/2023	26176	23104Q



Photo Log



Description:

Photo Log



Description:

Photo Log



Description:

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Photo Log



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Photo Log



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Description:

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

April 24, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Parker 29-34

Work Order #2304242

Enclosed are the results of analyses for samples received by Summit Scientific on 04/12/23 12:30. 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 - Parker 29-34

Project Number: [none]
Project Manager: Paul Henehan

Reported:
04/24/23 16:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01@4.0'	2304242-01	Soil	04/10/23 00:00	04/12/23 12:30
FL08@4.0'	2304242-02	Soil	04/10/23 00:00	04/12/23 12:30
FL09@5.0'	2304242-03	Soil	04/10/23 00:00	04/12/23 12:30
FL15@3.5'	2304242-04	Soil	04/10/23 00:00	04/12/23 12:30

Summit Scientific

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

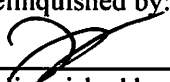

SUMMIT SCIENTIFIC

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

Lab ID	Page 1 of 1
2304242	

Client: Fremont Env		Send Data To:		Send Invoice To:	
Address:		Project Manager: Paul Henahan		Company: Noble	
City/State/Zip:		E-Mail: Paulh@fremontenv.com		Project Name/Location:	
Phone:		jeff@fremontenv.com Ethanb@fremontenv.com		AFE#:	
Sampler Name: J6		Project Name: Parker 29-34		PO/Billing Codes:	
		Project Number:		Contact:	

					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+N	TMBs (915)	DRO,ORO,GRO	PAHs(915)	EC,PH,SAR, Baron	Metals (915)				
1	FL01@4.0'	04/10/23		2			X			X			X	X	X	X	X					
2	FL02@4.0' FL02@4.0'	04/10/23		2			X			X			X	X	X	X	X					
3	FL09@5.0'	04/12/23		2			X			X			X	X	X	X	X					
4	FL15@3.5'	04/12/23		2			X			X			X	X	X	X	X					
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						

Relinquished by: 	Date/Time: 4/12/23 1231	Received by: 	Date/Time: 4/12/23 12:30	TAT Business Days	Field DO	Notes: Bill to Noble
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: 20.6		Corrected Temperature		IR gun #: 2	HNO3 lot #:	

S₂

Sample Receipt Checklist

S2 Work Order#

2304242

Client: Fremont

Client Project ID:

Parker 29-34

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

☐

Airbill #:

☒ ☐ ☐ ☐ ☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

20.6

Thermometer #

2

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

Additional Comments (if any):

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

Custodian Printed Name

Date/Time

MM4/12/2312:30



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL01@4.0'
2304242-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGD0463	04/14/23	04/15/23	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: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0411	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0373	93.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0396	99.1 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGD0465	04/14/23	04/16/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.4	115 %	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 - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL01@4.0'
2304242-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGD0444	04/14/23	04/14/23	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: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0242	72.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0211	63.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.136	0.0100	mg/L	1	BGD0450	04/14/23	04/22/23	EPA 6020B	

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

Date Sampled: **04/10/23 00:00**

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 - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL01@4.0'
2304242-01 (Soil)

Summit Scientific

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

Calcium	27.3	0.0588	mg/L dry	1	BGD0578	04/18/23	04/22/23	EPA 6020B
Magnesium	17.8	0.0588	"	"	"	"	"	"
Sodium	57.9	0.0588	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.12	0.00100	units	1	BGD0765	04/24/23	04/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.0		%	1	BGD0455	04/14/23	04/14/23	Calculation	

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

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.00		pH Units	1	BGD0616	04/19/23	04/19/23	EPA 9045D	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.452	0.0100	mmhos/cm	1	BGD0533	04/16/23	04/16/23	EPA 120.1	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL08@4.0'
2304242-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGD0463	04/14/23	04/15/23	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: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0414	103 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0372	93.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0399	99.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGD0465	04/14/23	04/16/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.5	108 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL08@4.0'
2304242-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGD0444	04/14/23	04/14/23	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: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0250	74.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0213	63.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.274	0.0100	mg/L	1	BGD0450	04/14/23	04/22/23	EPA 6020B	

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

Date Sampled: **04/10/23 00:00**

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 - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL08@4.0'
2304242-02 (Soil)

Summit Scientific

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

Calcium	46.6	0.0583	mg/L dry	1	BGD0578	04/18/23	04/22/23	EPA 6020B
Magnesium	11.5	0.0583	"	"	"	"	"	"
Sodium	94.4	0.0583	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.21	0.00100	units	1	BGD0765	04/24/23	04/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BGD0455	04/14/23	04/14/23	Calculation	

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

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.81		pH Units	1	BGD0616	04/19/23	04/19/23	EPA 9045D	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.580	0.0100	mmhos/cm	1	BGD0533	04/16/23	04/16/23	EPA 120.1	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL09@5.0'
2304242-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGD0463	04/14/23	04/15/23	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: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0401	100 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0379	94.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGD0465	04/14/23	04/16/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.6	117 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL09@5.0'
2304242-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGD0444	04/14/23	04/14/23	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: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0182	54.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0151	45.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.306	0.0100	mg/L	1	BGD0450	04/14/23	04/22/23	EPA 6020B	

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

Date Sampled: **04/10/23 00:00**

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 - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL09@5.0'
2304242-03 (Soil)

Summit Scientific

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

Calcium	88.1	0.0589	mg/L dry	1	BGD0578	04/18/23	04/22/23	EPA 6020B
Magnesium	35.8	0.0589	"	"	"	"	"	"
Sodium	175	0.0589	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.97	0.00100	units	1	BGD0765	04/24/23	04/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.8		%	1	BGD0455	04/14/23	04/14/23	Calculation	

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

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BGD0616	04/19/23	04/19/23	EPA 9045D	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.12	0.0100	mmhos/cm	1	BGD0533	04/16/23	04/16/23	EPA 120.1	

Summit Scientific

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PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL15@3.5'
2304242-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGD0463	04/14/23	04/15/23	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: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0404	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0394	98.5 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGD0465	04/14/23	04/16/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	13.3	107 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL15@3.5'
2304242-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGD0444	04/14/23	04/14/23	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: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0164	49.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0145	43.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.168	0.0100	mg/L	1	BGD0450	04/14/23	04/22/23	EPA 6020B	

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

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

FL15@3.5'
2304242-04 (Soil)

Summit Scientific

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

Calcium	35.2	0.0583	mg/L dry	1	BGD0578	04/18/23	04/22/23	EPA 6020B
Magnesium	11.8	0.0583	"	"	"	"	"	"
Sodium	44.7	0.0583	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.66	0.00100	units	1	BGD0765	04/24/23	04/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.8		%	1	BGD0455	04/14/23	04/14/23	Calculation	

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

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.98		pH Units	1	BGD0616	04/19/23	04/19/23	EPA 9045D	

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013

Date Sampled: **04/10/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.324	0.0100	mmhos/cm	1	BGD0533	04/16/23	04/16/23	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 - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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 BGD0463 - EPA 5030 Soil MS

Blank (BGD0463-BLK1)

Prepared & Analyzed: 04/14/23

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	0.0400		"	0.0400		100	50-150			
Surrogate: Toluene-d8	0.0367		"	0.0400		91.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0378		"	0.0400		94.6	50-150			

LCS (BGD0463-BS1)

Prepared & Analyzed: 04/14/23

Benzene	0.111	0.0020	mg/kg	0.125		88.7	70-130			
Toluene	0.143	0.0050	"	0.125		114	70-130			
Ethylbenzene	0.146	0.0050	"	0.125		117	70-130			
m,p-Xylene	0.292	0.010	"	0.250		117	70-130			
o-Xylene	0.139	0.0050	"	0.125		111	70-130			
1,2,4-Trimethylbenzene	0.158	0.0050	"	0.125		126	70-130			
1,3,5-Trimethylbenzene	0.157	0.0050	"	0.125		125	70-130			
Naphthalene	0.154	0.0038	"	0.125		123	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0413		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0371		"	0.0400		92.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.2	50-150			

Matrix Spike (BGD0463-MS1)

Source: 2304218-01

Prepared & Analyzed: 04/14/23

Benzene	0.105	0.0020	mg/kg	0.125	ND	83.8	70-130			
Toluene	0.142	0.0050	"	0.125	ND	114	70-130			
Ethylbenzene	0.144	0.0050	"	0.125	ND	115	70-130			
m,p-Xylene	0.285	0.010	"	0.250	ND	114	70-130			
o-Xylene	0.137	0.0050	"	0.125	ND	110	70-130			
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130			
1,3,5-Trimethylbenzene	0.152	0.0050	"	0.125	ND	122	70-130			
Naphthalene	0.153	0.0038	"	0.125	ND	123	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		107	50-150			
Surrogate: Toluene-d8	0.0377		"	0.0400		94.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0369		"	0.0400		92.2	50-150			

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PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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 BGD0463 - EPA 5030 Soil MS

Matrix Spike Dup (BGD0463-MSD1)	Source: 2304218-01			Prepared & Analyzed: 04/14/23						
Benzene	0.102	0.0020	mg/kg	0.125	ND	81.7	70-130	2.55	30	
Toluene	0.140	0.0050	"	0.125	ND	112	70-130	1.13	30	
Ethylbenzene	0.145	0.0050	"	0.125	ND	116	70-130	0.395	30	
m,p-Xylene	0.290	0.010	"	0.250	ND	116	70-130	1.99	30	
o-Xylene	0.138	0.0050	"	0.125	ND	110	70-130	0.895	30	
1,2,4-Trimethylbenzene	0.159	0.0050	"	0.125	ND	128	70-130	2.63	30	
1,3,5-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130	1.56	30	
Naphthalene	0.154	0.0038	"	0.125	ND	123	70-130	0.398	30	
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0372		"	0.0400		93.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0366		"	0.0400		91.5	50-150			

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Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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 BGD0465 - EPA 3550A

Blank (BGD0465-BLK1)

Prepared: 04/14/23 Analyzed: 04/15/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	14.1		"	12.5		112	30-150			

LCS (BGD0465-BS1)

Prepared: 04/14/23 Analyzed: 04/15/23

C10-C28 (DRO)	394	50	mg/kg	500		78.9	70-130			
Surrogate: o-Terphenyl	10.6		"	12.5		84.8	30-150			

Matrix Spike (BGD0465-MS1)

Source: 2304218-01

Prepared: 04/14/23 Analyzed: 04/15/23

C10-C28 (DRO)	388	50	mg/kg	500	13.7	74.8	70-130			
Surrogate: o-Terphenyl	11.2		"	12.5		89.3	30-150			

Matrix Spike Dup (BGD0465-MSD1)

Source: 2304218-01

Prepared: 04/14/23 Analyzed: 04/15/23

C10-C28 (DRO)	395	50	mg/kg	500	13.7	76.2	70-130	1.82	20	
Surrogate: o-Terphenyl	12.7		"	12.5		102	30-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGD0444 - EPA 5030 Soil MS

Blank (BGD0444-BLK1)

Prepared & Analyzed: 04/14/23

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	0.0298		"	0.0333		89.5	40-150			
Surrogate: Fluoranthene-d10	0.0288		"	0.0333		86.5	40-150			

LCS (BGD0444-BS1)

Prepared & Analyzed: 04/14/23

Acenaphthene	0.0303	0.00500	mg/kg	0.0333		90.9	31-137			
Anthracene	0.0314	0.00500	"	0.0333		94.3	30-120			
Benzo (a) anthracene	0.0239	0.00500	"	0.0333		71.6	30-120			
Benzo (a) pyrene	0.0230	0.00500	"	0.0333		69.0	30-120			
Benzo (b) fluoranthene	0.0243	0.00500	"	0.0333		72.8	30-120			
Benzo (k) fluoranthene	0.0229	0.00500	"	0.0333		68.6	30-120			
Chrysene	0.0198	0.00500	"	0.0333		59.4	30-120			
Dibenz (a,h) anthracene	0.0263	0.00500	"	0.0333		78.9	30-120			
Fluoranthene	0.0298	0.00500	"	0.0333		89.4	30-120			
Fluorene	0.0301	0.00500	"	0.0333		90.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0238	0.00500	"	0.0333		71.4	30-120			
Pyrene	0.0252	0.00500	"	0.0333		75.6	35-142			
1-Methylnaphthalene	0.0310	0.00500	"	0.0333		93.1	35-142			
2-Methylnaphthalene	0.0304	0.00500	"	0.0333		91.3	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0328		"	0.0333		98.3	40-150			
Surrogate: Fluoranthene-d10	0.0314		"	0.0333		94.1	40-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGD0444 - EPA 5030 Soil MS

Matrix Spike (BGD0444-MS1)

Source: 2304242-01

Prepared & Analyzed: 04/14/23

Acenaphthene	0.0165	0.00500	mg/kg	0.0333	ND	49.4	31-137			
Anthracene	0.0176	0.00500	"	0.0333	ND	52.9	30-120			
Benzo (a) anthracene	0.0147	0.00500	"	0.0333	ND	44.1	30-120			
Benzo (a) pyrene	0.0142	0.00500	"	0.0333	ND	42.7	30-120			
Benzo (b) fluoranthene	0.0161	0.00500	"	0.0333	ND	48.4	30-120			
Benzo (k) fluoranthene	0.0148	0.00500	"	0.0333	ND	44.4	30-120			
Chrysene	0.0148	0.00500	"	0.0333	ND	44.3	30-120			
Dibenz (a,h) anthracene	0.0145	0.00500	"	0.0333	ND	43.6	30-120			
Fluoranthene	0.0171	0.00500	"	0.0333	ND	51.3	30-120			
Fluorene	0.0168	0.00500	"	0.0333	ND	50.5	30-120			
Indeno (1,2,3-cd) pyrene	0.0137	0.00500	"	0.0333	ND	41.1	30-120			
Pyrene	0.0148	0.00500	"	0.0333	ND	44.3	35-142			
1-Methylnaphthalene	0.0221	0.00500	"	0.0333	ND	66.3	15-130			
2-Methylnaphthalene	0.0168	0.00500	"	0.0333	ND	50.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0199		"	0.0333		59.6	40-150			
Surrogate: Fluoranthene-d10	0.0173		"	0.0333		52.0	40-150			

Matrix Spike Dup (BGD0444-MSD1)

Source: 2304242-01

Prepared & Analyzed: 04/14/23

Acenaphthene	0.0196	0.00500	mg/kg	0.0333	ND	58.9	31-137	17.5	30	
Anthracene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	14.4	30	
Benzo (a) anthracene	0.0149	0.00500	"	0.0333	ND	44.6	30-120	1.19	30	
Benzo (a) pyrene	0.0151	0.00500	"	0.0333	ND	45.3	30-120	5.91	30	
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.2	30-120	4.58	30	
Benzo (k) fluoranthene	0.0149	0.00500	"	0.0333	ND	44.8	30-120	0.948	30	
Chrysene	0.0153	0.00500	"	0.0333	ND	45.9	30-120	3.45	30	
Dibenz (a,h) anthracene	0.0142	0.00500	"	0.0333	ND	42.5	30-120	2.61	30	
Fluoranthene	0.0190	0.00500	"	0.0333	ND	57.0	30-120	10.5	30	
Fluorene	0.0197	0.00500	"	0.0333	ND	59.2	30-120	15.9	30	
Indeno (1,2,3-cd) pyrene	0.0155	0.00500	"	0.0333	ND	46.5	30-120	12.4	30	
Pyrene	0.0164	0.00500	"	0.0333	ND	49.3	35-142	10.7	30	
1-Methylnaphthalene	0.0255	0.00500	"	0.0333	ND	76.5	15-130	14.3	50	
2-Methylnaphthalene	0.0182	0.00500	"	0.0333	ND	54.7	15-130	7.91	50	
Surrogate: 2-Methylnaphthalene-d10	0.0239		"	0.0333		71.6	40-150			
Surrogate: Fluoranthene-d10	0.0203		"	0.0333		60.8	40-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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 BGD0450 - EPA 3050B

Blank (BGD0450-BLK1)

Prepared: 04/14/23 Analyzed: 04/21/23

Boron ND 0.0100 mg/L

LCS (BGD0450-BS1)

Prepared: 04/14/23 Analyzed: 04/21/23

Boron 5.26 0.0100 mg/L 5.00 105 80-120

Duplicate (BGD0450-DUP1)

Source: 2304218-07

Prepared: 04/14/23 Analyzed: 04/21/23

Boron 0.0852 0.0100 mg/L 0.0891 4.54 20

Matrix Spike (BGD0450-MS1)

Source: 2304218-07

Prepared: 04/14/23 Analyzed: 04/21/23

Boron 5.32 0.0100 mg/L 5.00 0.0891 105 75-125

Matrix Spike Dup (BGD0450-MSD1)

Source: 2304218-07

Prepared: 04/14/23 Analyzed: 04/21/23

Boron 5.33 0.0100 mg/L 5.00 0.0891 105 75-125 0.234 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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 BGD0578 - General Preparation

Blank (BGD0578-BLK1)

Prepared: 04/18/23 Analyzed: 04/22/23

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

LCS (BGD0578-BS1)

Prepared: 04/18/23 Analyzed: 04/22/23

Calcium	5.31	0.0500	mg/L wet	5.00	106	70-130
Magnesium	4.75	0.0500	"	5.00	95.0	70-130
Sodium	4.87	0.0500	"	5.00	97.4	70-130

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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

Summit Scientific

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

Batch BGD0455 - General Preparation

Duplicate (BGD0455-DUP1)

Source: 2304240-01

Prepared & Analyzed: 04/14/23

% Solids	83.7	%	83.2	0.543	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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

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

Batch BGD0616 - General Preparation

LCS (BGD0616-BS1)

Prepared & Analyzed: 04/19/23

pH 9.11 pH Units 95-105

Duplicate (BGD0616-DUP1)

Source: 2304240-01

Prepared & Analyzed: 04/19/23

pH 7.81 pH Units 7.81 0.00 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

Saturation Paste by the Western Region Soil, Plant and Water Reference Methods 2013 - Quality Control
Summit Scientific

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

Batch BGD0533 - General Preparation

Blank (BGD0533-BLK1)

Prepared & Analyzed: 04/16/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGD0533-BS1)

Prepared & Analyzed: 04/16/23

Specific Conductance (EC) 0.149 0.0100 mmhos/cm 0.150 99.2 95-105

Duplicate (BGD0533-DUP1)

Source: 2304242-01

Prepared & Analyzed: 04/16/23

Specific Conductance (EC) 0.458 0.0100 mmhos/cm 0.452 1.30 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Parker 29-34

Project Number: [none]
Project Manager: Paul Henchan

Reported:
04/24/23 16:56

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