

FREMONT ENVIRONMENTAL INC.

March 7, 2024

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

Subject: **Flowline Closure Data Submittal**
Spike State CC 30-21 Flowline
API # 05-123-25432
NESW Sec. 30, T4N, R63W
Weld County, Colorado
Fremont Project No. C023-160
Remediation # 26815

Dear Mr. Peterson:

As requested, Fremont Environmental Inc. (Fremont) personnel conducted flowline closure activities for the Noble Energy Inc. (Noble) Spike State CC 30-21 Flowline. Impacted soil was reported for the sample collected at the former separator (SEP02@4'), however, this was reported under Remediation ID# 26863 for the associated Facility ID# 317854 in Document # 403648077. Details of the Spike State CC 30-21 Flowline closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (970) 213-7488 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Chris Lattes
Consultant

Attachments:

Facility Closure Checklist
Tables
Figures
Photos
Laboratory Report

**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: SPIKE STATE CC 30-21		Date: 6/8/2023				Remediation Project #: 26815		
Associated Wells: 123-25432		Age of Site: Unknown				Number of Photos Attached: See attached		
Starting point: (GPS coordinates and descriptions) 40.282375, -104.481563								
End point: (GPS coordinates and descriptions) 40.280776, -104.483718								
USCS Soil Type: Sand (SW)					Estimated Depth to Groundwater: Unknown			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) Elevated PIDs measured adjacent to former separator.								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth) No observed salt crusted soil or impacted vegetation.								
Flowlines								
Flowline type	Wellhead Line							
Depth	3-6'							
Age	Unknown							
Length	~1037 feet							
Construction Material	2" Steel TGF							
Were flowlines pulled?	Yes							
Visual Integrity of lines	Good condition							
Visual impacts if trenched	Elevated PID at SEP							
PID Readings if trenched	0.1 -1,004 ppm							
Sample taken? Location/Sample ID#	See attached figure							
Photo Number(s)	See attached							
Other observations regarding on location flowlines: Wellhead confirmation soil sample was collected by others. Soil impacts at separator were reported under the remediation ID for the associated facility.								
Summary								
Was impacted soil identified? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards								
Total number of samples field screened: 5					Total number of samples collected: 5			
Highest PID Reading: 1,004 ppm					Total number of samples submitted to lab for analysis: 1			
If more than 10 cubic yards of impacted soil were observed: NA, not excavated.								
Vertical extent:					Estimated spill volume:			
Lateral extent:					Volume of soil removed:			
Is additional investigation required? Yes - proceeding under REM ID 26863								
Was groundwater encountered during the investigation? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - not impacted or in contact with impacted soils <input type="checkbox"/> Yes - groundwater impacted and/or in contact with impacted soils								
Measured depth to groundwater:					Was remedial groundwater removal conducted? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Date Groundwater was encountered:					Commencement date of removal:			
Sheen on groundwater? <input type="checkbox"/> Yes <input type="checkbox"/> No					Volume of groundwater removed prior to sampling:			
Free product observed? <input type="checkbox"/> Yes <input type="checkbox"/> No					Volume of groundwater removed post sampling:			
Total number of samples collected:					Total Volume of groundwater removed:			
Total number of samples submitted to lab for analysis:								

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
SPIKE STATE CC 30-21, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-160

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**		
SEP02@4'	06/08/2023	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	0.037	<0.0038	0.99	<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)

* Indicates laboratory minimum detection limit in excess of SSL

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

NA - Not analyzed

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
SPIKE STATE CC 30-21, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-160

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
SEP02@4'	06/08/2023	4'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0135	<0.00500	<0.00500	0.0867	0.0162

Bold faced values exceed the COGCC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
SPIKE STATE CC 30-21, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-160

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
SEP02@4'	06/08/2023	4'	7.08	0.445	0.888	0.142

Bold faced values exceed the COGCC Table 915-1 concentrations

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

NA - Not analyzed

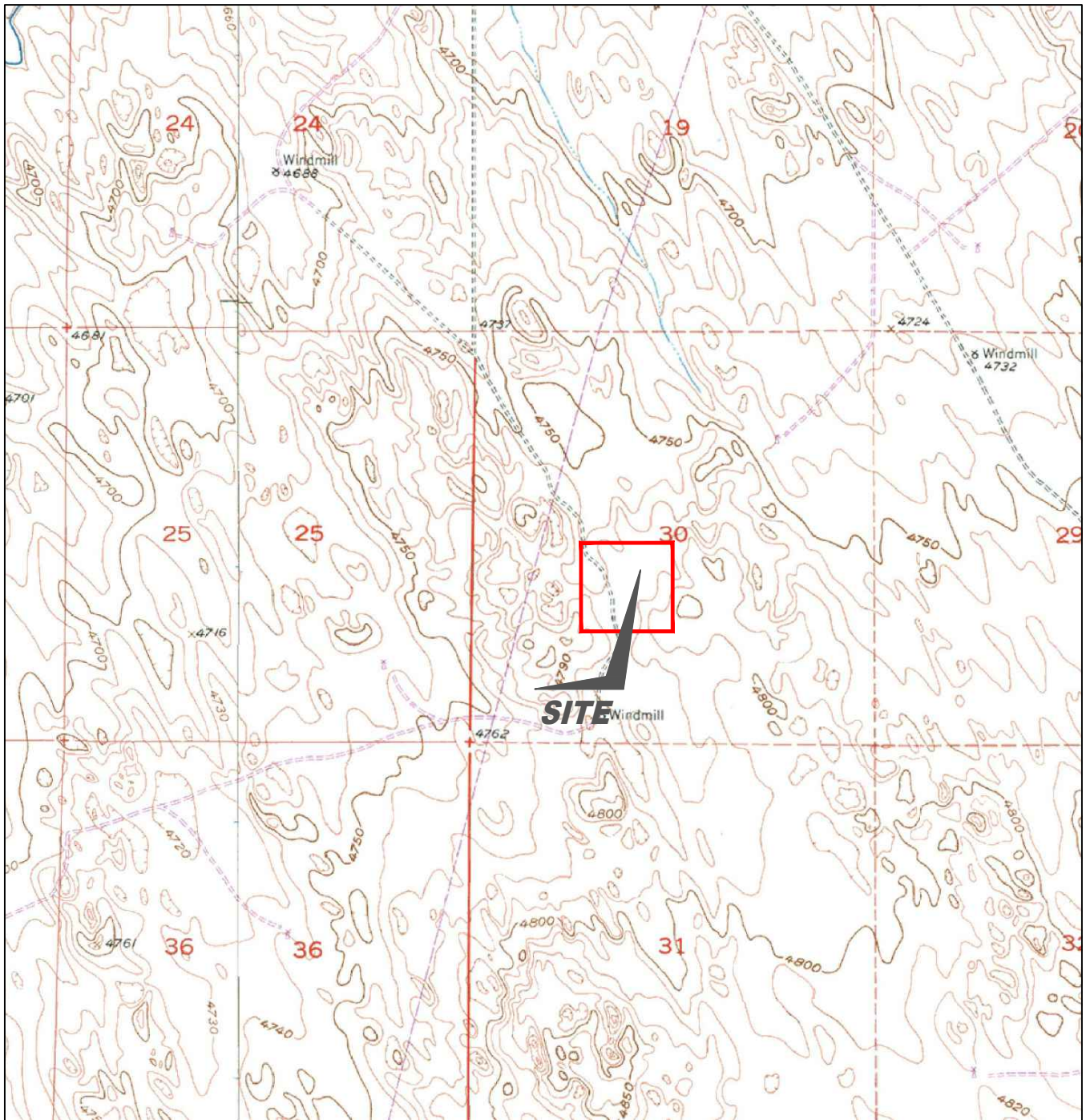


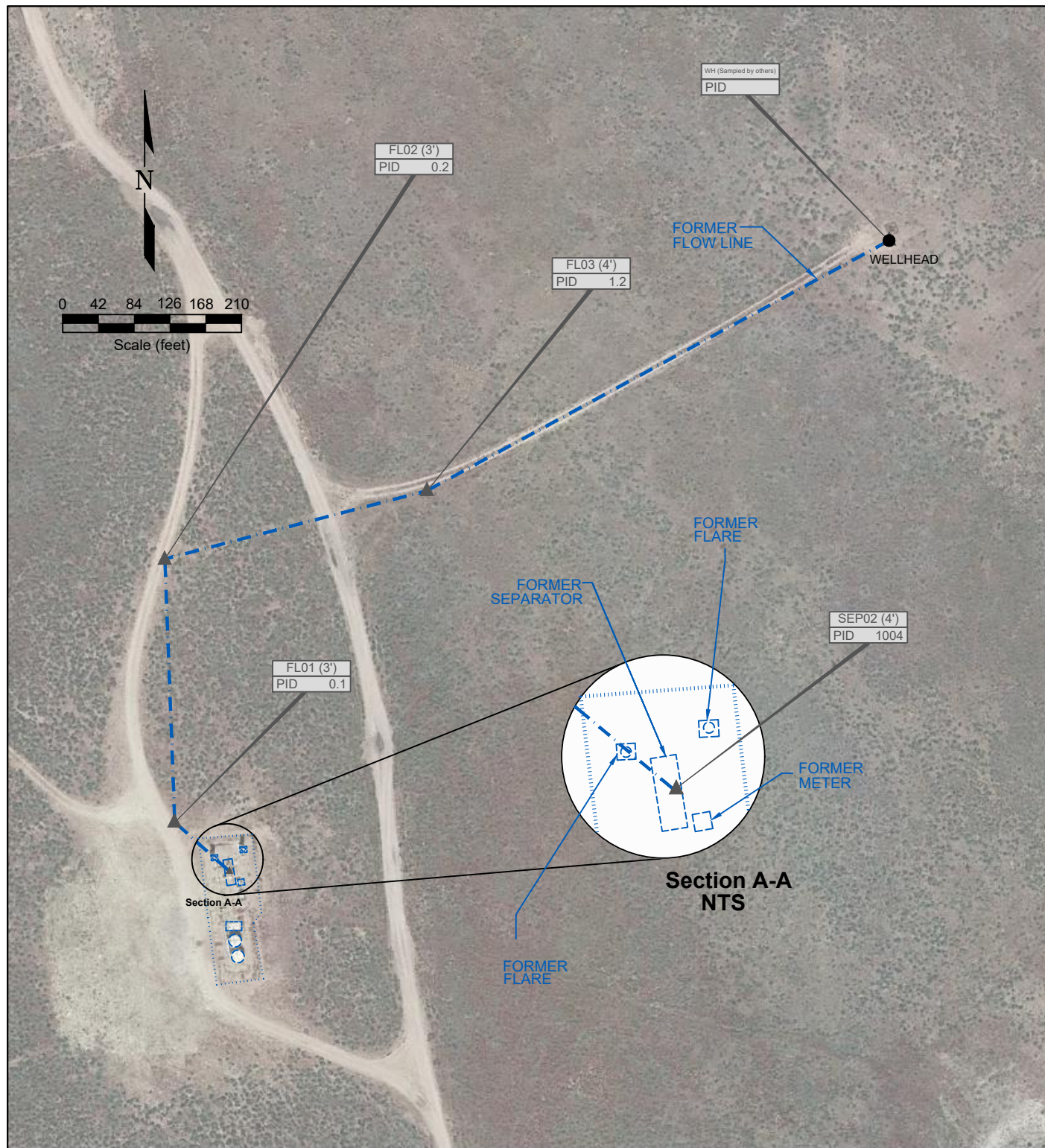
Figure 1
SITE LOCATION MAP

NOBLE ENERGY INC - SPIKE STATE CC 30-21
 NESW Sec. 30, T4N, R63W, 6th PM
 Weld County, Colorado
 40.282399°, -104.481537°

Project # CO23-160	API # 05-123-25432	Facility #
Date 09/2/2023	Remediation # 26815	Filename 23160T



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)



LEGEND

- WELLHEAD LOCATION
- ▲ PID READING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FLOW LINE
- CONTAINMENT BERM

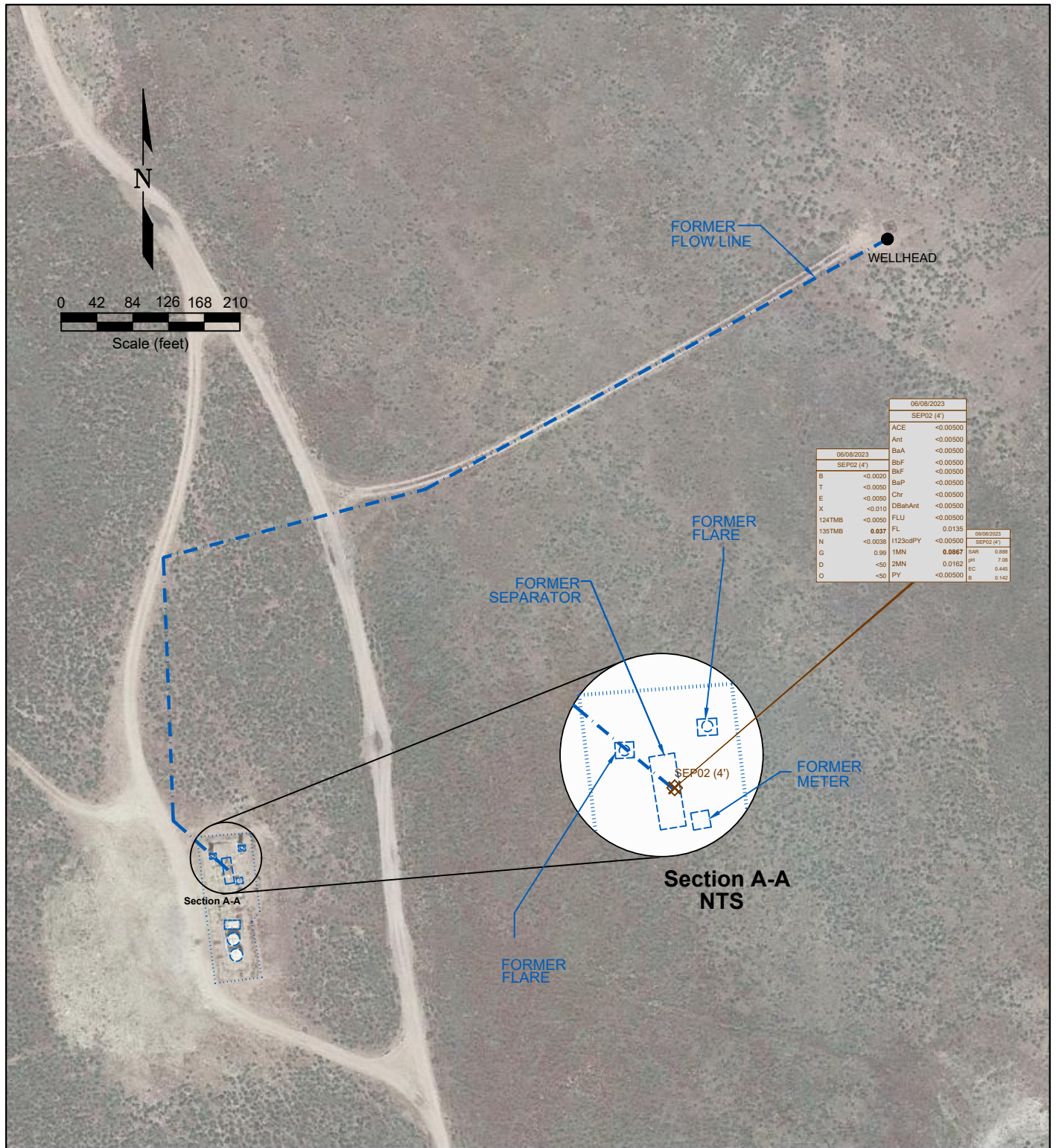
FL01 PID READING LOCATION IDENTIFICATION
PID 0.1 PHOTO IONIZATION DETECTION (ppm)

Figure 2
SITE MAP

NOBLE ENERGY INC - SPIKE STATE CC 30-21
 NESW Sec. 30, T4N, R63W, 6th PM
 Weld County, Colorado
 40.282399°, -104.481537°

Project # CO23-160	API # 05-123-25432	Facility #
Date 09/2/2023	Remediation # 26815	Filename 23160Q





LEGEND

- WELLHEAD LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FLOW LINE
- CONTAINMENT BERM

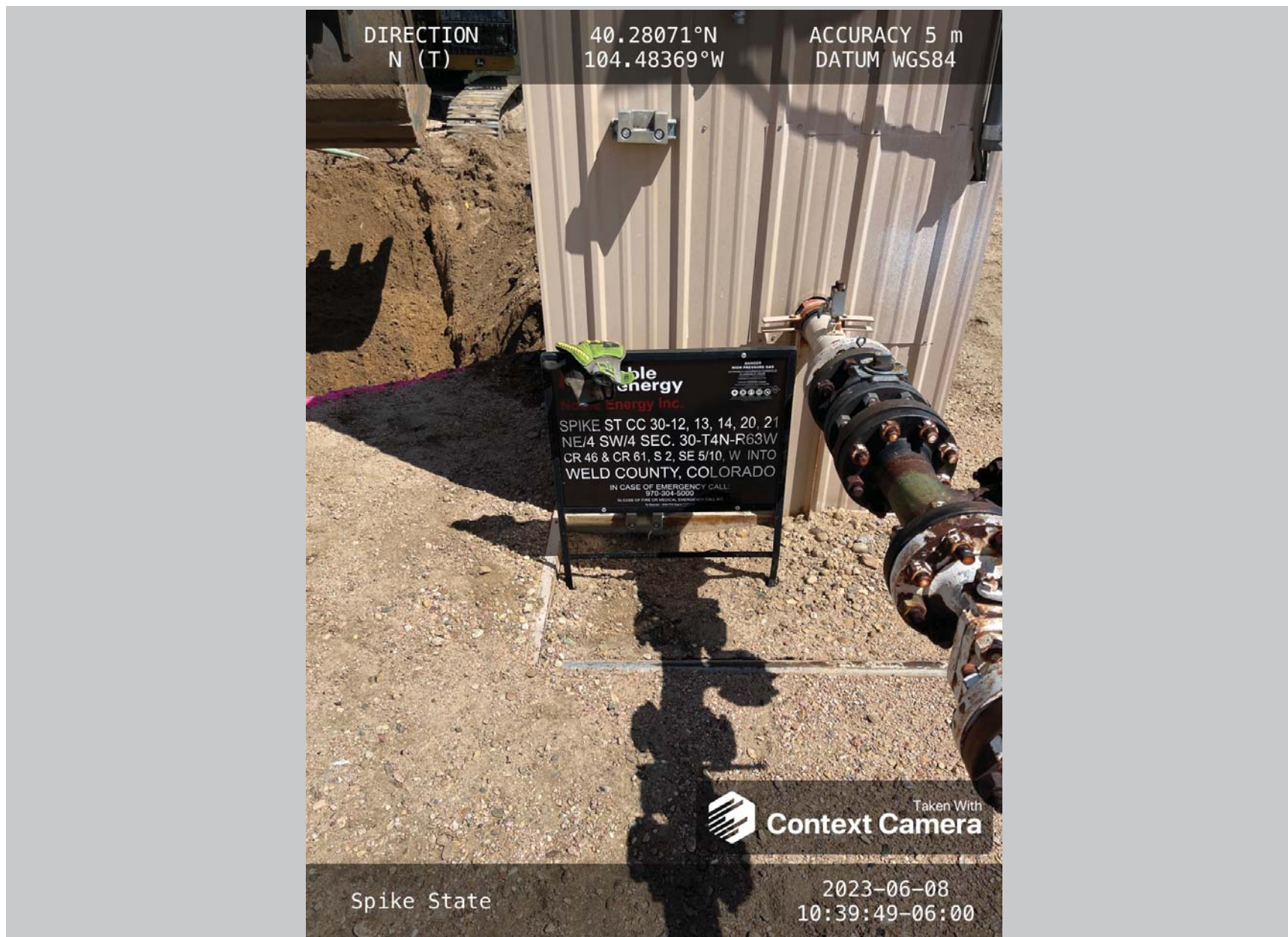
4/7/2023	DATE SAMPLED	4/7/2023	DATE SAMPLED	4/7/2023	DATE SAMPLED
FL01 (4')	SAMPLE ID and DEPTH (ft)	FL01 (4')	SAMPLE ID and DEPTH (ft)	FL01 (4')	SAMPLE ID and DEPTH (ft)
ACE	ACENAPHTHENE (mg/kg)	B	BENZENE (mg/kg)	SAR	SAR (units)
Ant	ANTHRACENE (mg/kg)	T	TOLUENE (mg/kg)	pH	pH (units)
BaA	BENZO (A) ANTHRACENE (mg/kg)	E	ETHYLBENZENE (mg/kg)	EC	EC (mmhos/cm)
BbF	BENZO (B) FLUORANTHENE (mg/kg)	X	TOTAL XYLENES (mg/kg)	BORON	BORON (mg/L)
BaP	BENZO (K) FLUORANTHENE (mg/kg)	134TMB	1,2,4-TRIMETHYLBENZENE (mg/kg)		
Chr	BENZO (A) PYRENE (mg/kg)	135TMB	1,3,5-TRIMETHYLBENZENE (mg/kg)		
DBahAnt	DIBENZ (A,H) ANTHRACENE (mg/kg)	N	NAPHTHALENE (mg/kg)		
FLU	FLUORANTHENE (mg/kg)	G	TPH-GRO (mg/kg)		
FL	FLUORENE (mg/kg)	D	TPH-DRO (mg/kg)		
1123cdPY	INDENO (1,2,3-CD) PYRENE (mg/kg)	O	TPH-CRO (mg/kg)		
1MN	1-METHYLNAPHTHALENE (mg/kg)				
2MN	2-METHYLNAPHTHALENE (mg/kg)				
PY	PYRENE (mg/kg)				

Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY INC - SPIKE STATE CC 30-21
 NESW Sec. 30, T4N, R63W, 6th PM
 Weld County, Colorado
 40.282399°, -104.481537°

Project #	API #	Facility #	
CO23-160	05-123-25432		
Date	Remediation #	Filename	
09/2/2023	26815	23160Q	

Photo Log



Description:

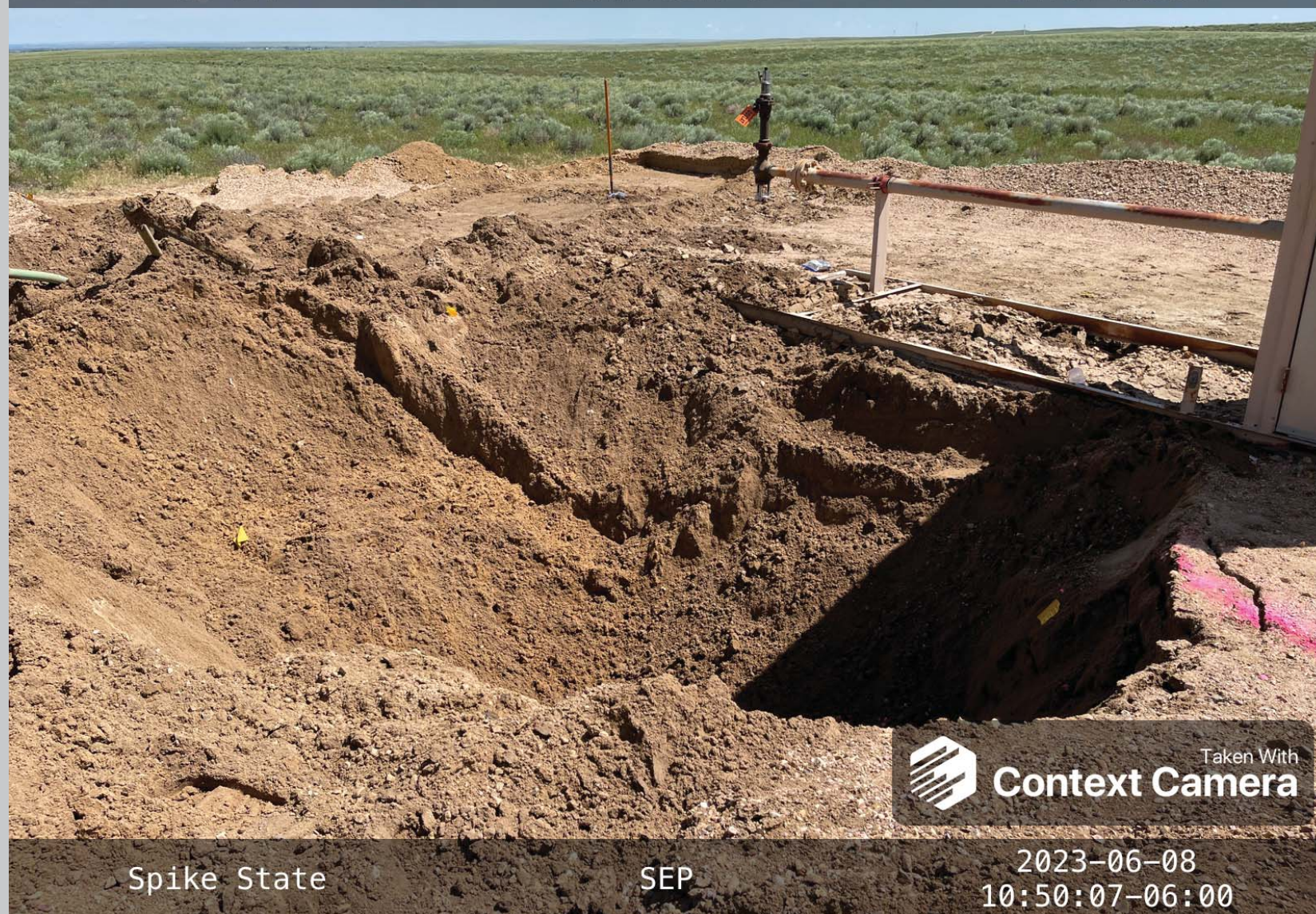
Facility Placard

Photo Log

DIRECTION
NE (T)

40.28073°N
104.48377°W

ACCURACY 5 m
DATUM WGS84



Spike State

SEP



Taken With
Context Camera

2023-06-08
10:50:07-06:00

Description:

Separator Excavation; SEP01@6' (Right), SEP02@4' Left

Photo Log



Description:

Separator Excavation; SEP01@6' (Far), SEP02@4' (Close)

Photo Log



Description:

Spike State 30-20 & 21 FL01@3'

Photo Log



Description:

Spike State 30-20&21 FL02@3'

Photo Log

DIRECTION
NE (T)

40.28174°N
104.48314°W

ACCURACY 5 m
DATUM WGS84



Taken With
Context Camera

Spike State
CC30-21

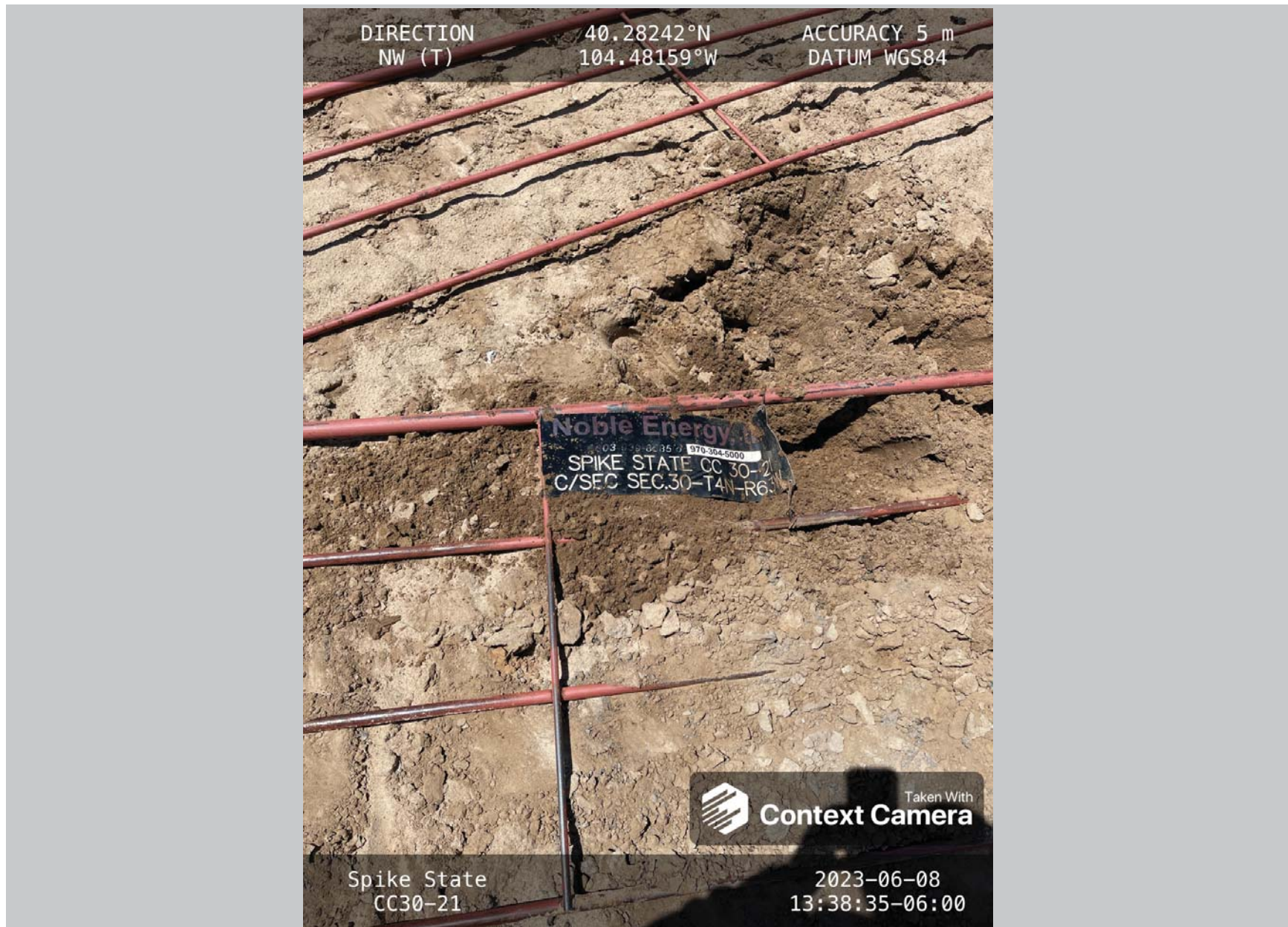
FL03

2023-06-08
13:28:44-06:00

Description:

Spike State CC30-20 FL03@4'

Photo Log



Description:

Spike State CC30-21 Former WH Placard

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 03, 2023

Paul Henchan

Fremont Environmental

PO Box 1289


Wellington, CO 80549

RE: Noble - Spike State CC 30-20 TB

Work Order #2306210

Enclosed are the results of analyses for samples received by Summit Scientific on 06/12/23 12:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB

Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
ECD01@6"	2306210-01	Soil	06/08/23 00:00	06/12/23 12:15
AST01@1'	2306210-02	Soil	06/08/23 00:00	06/12/23 12:15
AST02@1'	2306210-03	Soil	06/08/23 00:00	06/12/23 12:15
SEP02@4'	2306210-04	Soil	06/08/23 00:00	06/12/23 12:15
PWVB01@6'	2306210-05	Soil	06/08/23 00:00	06/12/23 12:15
PWVW01@5'	2306210-06	Soil	06/08/23 00:00	06/12/23 12:15

Summit Scientific

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

Summit Scientific

S₂

2306210

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:

E-Mail: Fremont Distribution List: PaulH, EthanB, JeffG and ChrisL. @fremontenv.com

City/State/Zip:

Bill to Noble UWRWE-A2125-ABN

Phone:

Project Name: Spike State CC30-20 TB

Sampler Name: Chris Lattes

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested							Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	TPH, BTEX, TMBS, Naph	PAH (915)	EC, SAR, pH, Boron	Metals (915)	TDS, Chloride, Sulfate	HOLD		
1	ECD01@6"	6/9/23		2			X						X	X	X					
2	AST01@1"	↓		↓									↓	↓	↓					
3	AST02@1"			↓									↓	↓	↓					
4	SEP02@4"			↓									↓	↓	↓					
5	PWV301@6'	✓		✓									↓	↓	↓					
6	PWVW01@5'	6/9/23		2			X						X	X	X					
7																				
8																				
9																				
10																				

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes: FL+Fac "Spike" on Containers
Chris Lattes	6/12/23 12:15	S2	6/12/23 12:15	Same Day	72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours	Standard	
S2	6/12/23 12:15	[Signature]	6/12/23 12:15	48 hours		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Sample Integrity:	Temperature Upon Receipt:	
				Samples Intact: Yes No	143	

S₂

Sample Receipt Checklist

S2 Work Order# 2306210Client: FremontClient Project ID: Spike State CC30-70 TBShipped Via: H.D./P.U./FedEx/UPS/USPS/Other

Airbill #: _____

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

Matrix (Check all that apply)

Air

☐

Soil/Solid

☒

Water

☐

Other

☐

Temp (°C)

14.3

Thermometer #

1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ice
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input type="checkbox"/>	<input checked="" 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.
AS
 Custodian Printed Name

6/12/23
 Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB

Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

ECD01@6"
2306210-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF0471	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0408	102 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0394	98.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0420	105 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0480	06/13/23	06/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.6	93.1 %	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 - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

ECD01@6"
2306210-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0464	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0203	61.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0257	77.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/08/23 00:00**

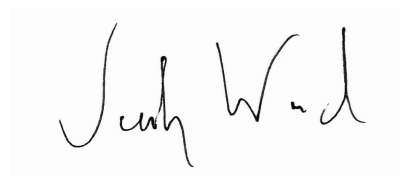
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.378	0.0100	mg/L	1	BGF0454	06/13/23	06/19/23	EPA 6020B	

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

Date Sampled: **06/08/23 00:00**

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



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

ECD01@6''
2306210-01 (Soil)

Summit Scientific

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

Calcium	65.3	0.0565	mg/L dry	1	BGF0466	06/13/23	06/19/23	EPA 6020B
Magnesium	8.84	0.0565	"	"	"	"	"	"
Sodium	8.11	0.0565	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.250	0.00100	units	1	BGF0699	06/20/23	06/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.5		%	1	BGF0469	06/13/23	06/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.298	0.0100	mmhos/cm	1	BGF0498	06/14/23	06/14/23	EPA 120.1	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95		pH Units	1	BGF0500	06/14/23	06/14/23	EPA 9045D	

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

AST01@1'
2306210-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF0471	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0364	90.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0380	95.0 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0413	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0480	06/13/23	06/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.8	94.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

AST01@1'
2306210-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGF0464	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0202	60.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0265	79.4 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	0.0148	0.0100	mg/L	1	BGF0454	06/13/23	06/19/23	EPA 6020B	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

AST01@1'
2306210-02 (Soil)

Summit Scientific

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

Calcium	13.6	0.0531	mg/L dry	1	BGF0466	06/13/23	06/19/23	EPA 6020B
Magnesium	4.42	0.0531	"	"	"	"	"	"
Sodium	1.57	0.0531	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0946	0.00100	units	1	BGF0699	06/20/23	06/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.2		%	1	BGF0469	06/13/23	06/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.245	0.0100	mmhos/cm	1	BGF0498	06/14/23	06/14/23	EPA 120.1	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	3.90		pH Units	1	BGF0500	06/14/23	06/14/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB

Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

AST02@1'
2306210-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF0471	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0366	91.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0373	93.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0405	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0480	06/13/23	06/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.9	94.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

AST02@1'
2306210-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0464	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0268	80.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/08/23 00:00**


Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0729	0.0100	mg/L	1	BGF0454	06/13/23	06/19/23	EPA 6020B	

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

Date Sampled: **06/08/23 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 - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

AST02@1'
2306210-03 (Soil)

Summit Scientific

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

Calcium	141	0.0538	mg/L dry	1	BGF0466	06/13/23	06/19/23	EPA 6020B
Magnesium	30.8	0.0538	"	"	"	"	"	"
Sodium	1.14	0.0538	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0227	0.00100	units	1	BGF0699	06/20/23	06/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.9		%	1	BGF0469	06/13/23	06/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.211	0.0100	mmhos/cm	1	BGF0498	06/14/23	06/14/23	EPA 120.1	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.06		pH Units	1	BGF0500	06/14/23	06/14/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB

Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

SEP02@4'
2306210-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF0471	06/13/23	06/13/23	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	0.037	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	0.99	0.50	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0415	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0405	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0403	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0480	06/13/23	06/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	12.5	99.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

SEP02@4'
2306210-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGF0464	06/13/23	06/13/23	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	0.0135	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0867	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0162	0.00500	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0213	63.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0263	78.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.142	0.0100	mg/L	1	BGF0454	06/13/23	06/19/23	EPA 6020B	

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

Date Sampled: **06/08/23 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 - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

SEP02@4'
2306210-04 (Soil)

Summit Scientific

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

Calcium	36.5	0.0544	mg/L dry	1	BGF0466	06/13/23	06/19/23	EPA 6020B
Magnesium	7.36	0.0544	"	"	"	"	"	"
Sodium	22.5	0.0544	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.888	0.00100	units	1	BGF0699	06/20/23	06/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.8		%	1	BGF0469	06/13/23	06/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.445	0.0100	mmhos/cm	1	BGF0498	06/14/23	06/14/23	EPA 120.1	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.08		pH Units	1	BGF0500	06/14/23	06/14/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

PWVB01@6'
2306210-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF0471	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0376	94.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0384	96.1 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0408	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0480	06/13/23	06/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.8	94.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

PWVB01@6'
2306210-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGF0464	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0210	63.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0289	86.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	0.456	0.0100	mg/L	1	BGF0454	06/13/23	06/19/23	EPA 6020B	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

PWVB01@6'
2306210-05 (Soil)

Summit Scientific

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

Calcium	144	0.0539	mg/L dry	1	BGF0466	06/13/23	06/19/23	EPA 6020B
Magnesium	22.2	0.0539	"	"	"	"	"	"
Sodium	95.4	0.0539	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.95	0.00100	units	1	BGF0699	06/20/23	06/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.8		%	1	BGF0469	06/13/23	06/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.830	0.0100	mmhos/cm	1	BGF0498	06/14/23	06/14/23	EPA 120.1	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.88		pH Units	1	BGF0500	06/14/23	06/14/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

PWVW01@5'
2306210-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF0471	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0395	98.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF0480	06/13/23	06/13/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.8	94.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

PWVW01@5'
2306210-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGF0464	06/13/23	06/13/23	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: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0202	60.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0262	78.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	0.122	0.0100	mg/L	1	BGF0454	06/13/23	06/19/23	EPA 6020B	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

PWVW01@5'
2306210-06 (Soil)

Summit Scientific

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

Calcium	161	0.0549	mg/L dry	1	BGF0466	06/13/23	06/19/23	EPA 6020B
Magnesium	30.3	0.0549	"	"	"	"	"	"
Sodium	3.90	0.0549	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0739	0.00100	units	1	BGF0699	06/20/23	06/20/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.2		%	1	BGF0469	06/13/23	06/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.272	0.0100	mmhos/cm	1	BGF0498	06/14/23	06/14/23	EPA 120.1	

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

Date Sampled: **06/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.17		pH Units	1	BGF0500	06/14/23	06/14/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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 BGF0471 - EPA 5030 Soil MS

Blank (BGF0471-BLK1)

Prepared: 06/06/23 Analyzed: 06/13/23

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	0.0382		"	0.0400		95.4	50-150			
Surrogate: Toluene-d8	0.0380		"	0.0400		95.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0413		"	0.0400		103	50-150			

LCS (BGF0471-BS1)

Prepared: 06/06/23 Analyzed: 06/13/23

Benzene	0.0688	0.0020	mg/kg	0.0750		91.7	70-130			
Toluene	0.0800	0.0050	"	0.0750		107	70-130			
Ethylbenzene	0.0940	0.0050	"	0.0750		125	70-130			
m,p-Xylene	0.185	0.010	"	0.150		123	70-130			
o-Xylene	0.0819	0.0050	"	0.0750		109	70-130			
1,2,4-Trimethylbenzene	0.0847	0.0050	"	0.0750		113	70-130			
1,3,5-Trimethylbenzene	0.0903	0.0050	"	0.0750		120	70-130			
Naphthalene	0.0654	0.0038	"	0.0750		87.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0333		"	0.0400		83.2	50-150			
Surrogate: Toluene-d8	0.0385		"	0.0400		96.3	50-150			
Surrogate: 4-Bromofluorobenzene	0.0391		"	0.0400		97.8	50-150			

Matrix Spike (BGF0471-MS1)

Source: 2306210-01

Prepared: 06/06/23 Analyzed: 06/13/23

Benzene	0.0651	0.0020	mg/kg	0.0750	ND	86.8	70-130			
Toluene	0.0732	0.0050	"	0.0750	ND	97.6	70-130			
Ethylbenzene	0.0876	0.0050	"	0.0750	ND	117	70-130			
m,p-Xylene	0.172	0.010	"	0.150	ND	115	70-130			
o-Xylene	0.0779	0.0050	"	0.0750	ND	104	70-130			
1,2,4-Trimethylbenzene	0.0822	0.0050	"	0.0750	ND	110	70-130			
1,3,5-Trimethylbenzene	0.0846	0.0050	"	0.0750	ND	113	70-130			
Naphthalene	0.0705	0.0038	"	0.0750	ND	94.0	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0348		"	0.0400		86.9	50-150			
Surrogate: Toluene-d8	0.0378		"	0.0400		94.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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 BGF0471 - EPA 5030 Soil MS

Matrix Spike Dup (BGF0471-MSD1)	Source: 2306210-01			Prepared: 06/06/23 Analyzed: 06/13/23						
Benzene	0.0662	0.0020	mg/kg	0.0750	ND	88.3	70-130	1.64	30	
Toluene	0.0751	0.0050	"	0.0750	ND	100	70-130	2.51	30	
Ethylbenzene	0.0872	0.0050	"	0.0750	ND	116	70-130	0.446	30	
m,p-Xylene	0.173	0.010	"	0.150	ND	115	70-130	0.191	30	
o-Xylene	0.0770	0.0050	"	0.0750	ND	103	70-130	1.20	30	
1,2,4-Trimethylbenzene	0.0818	0.0050	"	0.0750	ND	109	70-130	0.512	30	
1,3,5-Trimethylbenzene	0.0853	0.0050	"	0.0750	ND	114	70-130	0.777	30	
Naphthalene	0.0730	0.0038	"	0.0750	ND	97.4	70-130	3.55	30	
Surrogate: 1,2-Dichloroethane-d4	0.0356		"	0.0400		88.9	50-150			
Surrogate: Toluene-d8	0.0383		"	0.0400		95.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0400		"	0.0400		100	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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 BGF0480 - EPA 3550A

Blank (BGF0480-BLK1)

Prepared & Analyzed: 06/13/23

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

Surrogate: o-Terphenyl	11.9	"	12.5	95.5	30-150
------------------------	------	---	------	------	--------

LCS (BGF0480-BS1)

Prepared & Analyzed: 06/13/23

C10-C28 (DRO)	449	50	mg/kg	500	89.8	70-130
Surrogate: o-Terphenyl	11.7	"	12.5	93.3	30-150	

Matrix Spike (BGF0480-MS1)

Source: 2306210-01

Prepared & Analyzed: 06/13/23

C10-C28 (DRO)	421	50	mg/kg	500	18.5	80.5	70-130
Surrogate: o-Terphenyl	11.5	"	12.5	91.9	30-150		

Matrix Spike Dup (BGF0480-MSD1)

Source: 2306210-01

Prepared & Analyzed: 06/13/23

C10-C28 (DRO)	465	50	mg/kg	500	18.5	89.3	70-130	9.89	20
Surrogate: o-Terphenyl	12.3	"	12.5	98.7	30-150				

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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 BGF0464 - EPA 5030 Soil MS

Blank (BGF0464-BLK1)

Prepared & Analyzed: 06/13/23

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	0.0279		"	0.0333		83.6	40-150			
Surrogate: Fluoranthene-d10	0.0345		"	0.0333		104	40-150			

LCS (BGF0464-BS1)

Prepared & Analyzed: 06/13/23

Acenaphthene	0.0328	0.00500	mg/kg	0.0333		98.5	31-137			
Anthracene	0.0347	0.00500	"	0.0333		104	30-120			
Benzo (a) anthracene	0.0292	0.00500	"	0.0333		87.5	30-120			
Benzo (a) pyrene	0.0278	0.00500	"	0.0333		83.5	30-120			
Benzo (b) fluoranthene	0.0294	0.00500	"	0.0333		88.3	30-120			
Benzo (k) fluoranthene	0.0315	0.00500	"	0.0333		94.5	30-120			
Chrysene	0.0345	0.00500	"	0.0333		103	30-120			
Dibenz (a,h) anthracene	0.0212	0.00500	"	0.0333		63.7	30-120			
Fluoranthene	0.0325	0.00500	"	0.0333		97.4	30-120			
Fluorene	0.0325	0.00500	"	0.0333		97.4	30-120			
Indeno (1,2,3-cd) pyrene	0.0189	0.00500	"	0.0333		56.7	30-120			
Pyrene	0.0360	0.00500	"	0.0333		108	35-142			
1-Methylnaphthalene	0.0268	0.00500	"	0.0333		80.4	35-142			
2-Methylnaphthalene	0.0287	0.00500	"	0.0333		86.0	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0294		"	0.0333		88.2	40-150			
Surrogate: Fluoranthene-d10	0.0327		"	0.0333		98.2	40-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGF0464 - EPA 5030 Soil MS

Matrix Spike (BGF0464-MS1)			Source: 2306210-01			Prepared & Analyzed: 06/13/23					
Acenaphthene	0.0145	0.00500	mg/kg	0.0333	ND	43.4	31-137				
Anthracene	0.0134	0.00500	"	0.0333	ND	40.1	30-120				
Benzo (a) anthracene	0.0136	0.00500	"	0.0333	ND	40.9	30-120				
Benzo (a) pyrene	0.0154	0.00500	"	0.0333	ND	46.2	30-120				
Benzo (b) fluoranthene	0.0140	0.00500	"	0.0333	ND	42.1	30-120				
Benzo (k) fluoranthene	0.0160	0.00500	"	0.0333	ND	47.9	30-120				
Chrysene	0.0151	0.00500	"	0.0333	ND	45.3	30-120				
Dibenz (a,h) anthracene	0.0137	0.00500	"	0.0333	ND	41.2	30-120				
Fluoranthene	0.0134	0.00500	"	0.0333	ND	40.1	30-120				
Fluorene	0.0146	0.00500	"	0.0333	ND	43.9	30-120				
Indeno (1,2,3-cd) pyrene	0.0137	0.00500	"	0.0333	ND	41.0	30-120				
Pyrene	0.0144	0.00500	"	0.0333	ND	43.1	35-142				
1-Methylnaphthalene	0.0147	0.00500	"	0.0333	ND	44.0	15-130				
2-Methylnaphthalene	0.0136	0.00500	"	0.0333	ND	40.7	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0151		"	0.0333		45.3	40-150				
Surrogate: Fluoranthene-d10	0.0139		"	0.0333		41.6	40-150				

Matrix Spike Dup (BGF0464-MSD1)			Source: 2306210-01			Prepared & Analyzed: 06/13/23					
Acenaphthene	0.0158	0.00500	mg/kg	0.0333	ND	47.3	31-137	8.70	30		
Anthracene	0.0151	0.00500	"	0.0333	ND	45.3	30-120	12.1	30		
Benzo (a) anthracene	0.0170	0.00500	"	0.0333	ND	51.1	30-120	22.2	30		
Benzo (a) pyrene	0.0154	0.00500	"	0.0333	ND	46.3	30-120	0.149	30		
Benzo (b) fluoranthene	0.0154	0.00500	"	0.0333	ND	46.2	30-120	9.34	30		
Benzo (k) fluoranthene	0.0150	0.00500	"	0.0333	ND	44.9	30-120	6.63	30		
Chrysene	0.0178	0.00500	"	0.0333	ND	53.3	30-120	16.2	30		
Dibenz (a,h) anthracene	0.0143	0.00500	"	0.0333	ND	42.9	30-120	4.06	30		
Fluoranthene	0.0158	0.00500	"	0.0333	ND	47.5	30-120	16.8	30		
Fluorene	0.0150	0.00500	"	0.0333	ND	44.9	30-120	2.32	30		
Indeno (1,2,3-cd) pyrene	0.0148	0.00500	"	0.0333	ND	44.4	30-120	7.93	30		
Pyrene	0.0193	0.00500	"	0.0333	ND	57.8	35-142	29.1	30		
1-Methylnaphthalene	0.0168	0.00500	"	0.0333	ND	50.3	15-130	13.5	50		
2-Methylnaphthalene	0.0167	0.00500	"	0.0333	ND	50.1	15-130	20.5	50		
Surrogate: 2-Methylnaphthalene-d10	0.0174		"	0.0333		52.3	40-150				
Surrogate: Fluoranthene-d10	0.0208		"	0.0333		62.5	40-150				

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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 BGF0454 - EPA 3050B

Blank (BGF0454-BLK1)

Prepared: 06/13/23 Analyzed: 06/19/23

Boron ND 0.0100 mg/L

LCS (BGF0454-BS1)

Prepared: 06/13/23 Analyzed: 06/19/23

Boron 5.24 0.0100 mg/L 5.00 105 80-120

Duplicate (BGF0454-DUP1)

Source: 2306196-01

Prepared: 06/13/23 Analyzed: 06/19/23

Boron 0.149 0.0100 mg/L 0.165 10.4 20

Matrix Spike (BGF0454-MS1)

Source: 2306196-01

Prepared: 06/13/23 Analyzed: 06/19/23

Boron 4.85 0.0100 mg/L 5.00 0.165 93.6 75-125

Matrix Spike Dup (BGF0454-MSD1)

Source: 2306196-01

Prepared: 06/13/23 Analyzed: 06/19/23

Boron 4.76 0.0100 mg/L 5.00 0.165 91.9 75-125 1.76 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB

Project Number: UWRWE-A2125-ABN

Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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

Summit Scientific

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

Batch BGF0466 - General Preparation

Blank (BGF0466-BLK1)

Prepared: 06/13/23 Analyzed: 06/19/23

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

LCS (BGF0466-BS1)

Prepared: 06/13/23 Analyzed: 06/19/23

Calcium	6.16	0.0500	mg/L wet	5.00	123	70-130
Magnesium	5.41	0.0500	"	5.00	108	70-130
Sodium	5.55	0.0500	"	5.00	111	70-130

Summit Scientific

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Fremont Environmental	Project: Noble - Spike State CC 30-20 TB	
PO Box 1289	Project Number: UWRWE-A2125-ABN	Reported:
Wellington CO, 80549	Project Manager: Paul Henchan	07/03/23 08:22

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

Summit Scientific

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

Batch BGF0469 - General Preparation

Duplicate (BGF0469-DUP1)	Source: 2305670-04	Prepared & Analyzed: 06/13/23
% Solids	76.8	%77.61.0220

Summit Scientific

Judy Wood

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB

Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BGF0498 - General Preparation

Blank (BGF0498-BLK1)

Prepared & Analyzed: 06/14/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGF0498-BS1)

Prepared & Analyzed: 06/14/23

Specific Conductance (EC) 0.154 0.0100 mmhos/cm 0.150 103 95-105

Duplicate (BGF0498-DUP1)

Source: 2306184-01

Prepared & Analyzed: 06/14/23

Specific Conductance (EC) 1.35 0.0100 mmhos/cm 1.42 4.99 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB
Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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

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

Batch BGF0500 - General Preparation

LCS (BGF0500-BS1)

Prepared & Analyzed: 06/14/23

pH	9.13		pH Units	9.18		99.5	95-105		
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Duplicate (BGF0500-DUP1)

Source: 2306184-01

Prepared & Analyzed: 06/14/23

pH	7.32		pH Units		7.30			0.274	20
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Batch BGF0981 - General Preparation

LCS (BGF0981-BS1)

Prepared & Analyzed: 06/27/23

pH	9.14		pH Units	9.18		99.6	95-105		
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Duplicate (BGF0981-DUP1)

Source: 2305511-11RE1

Prepared & Analyzed: 06/27/23

pH	8.13		pH Units		8.10			0.370	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Spike State CC 30-20 TB

Project Number: UWRWE-A2125-ABN
Project Manager: Paul Henchan

Reported:
07/03/23 08:22

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