

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

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

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

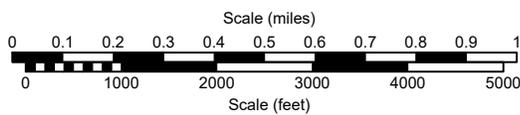
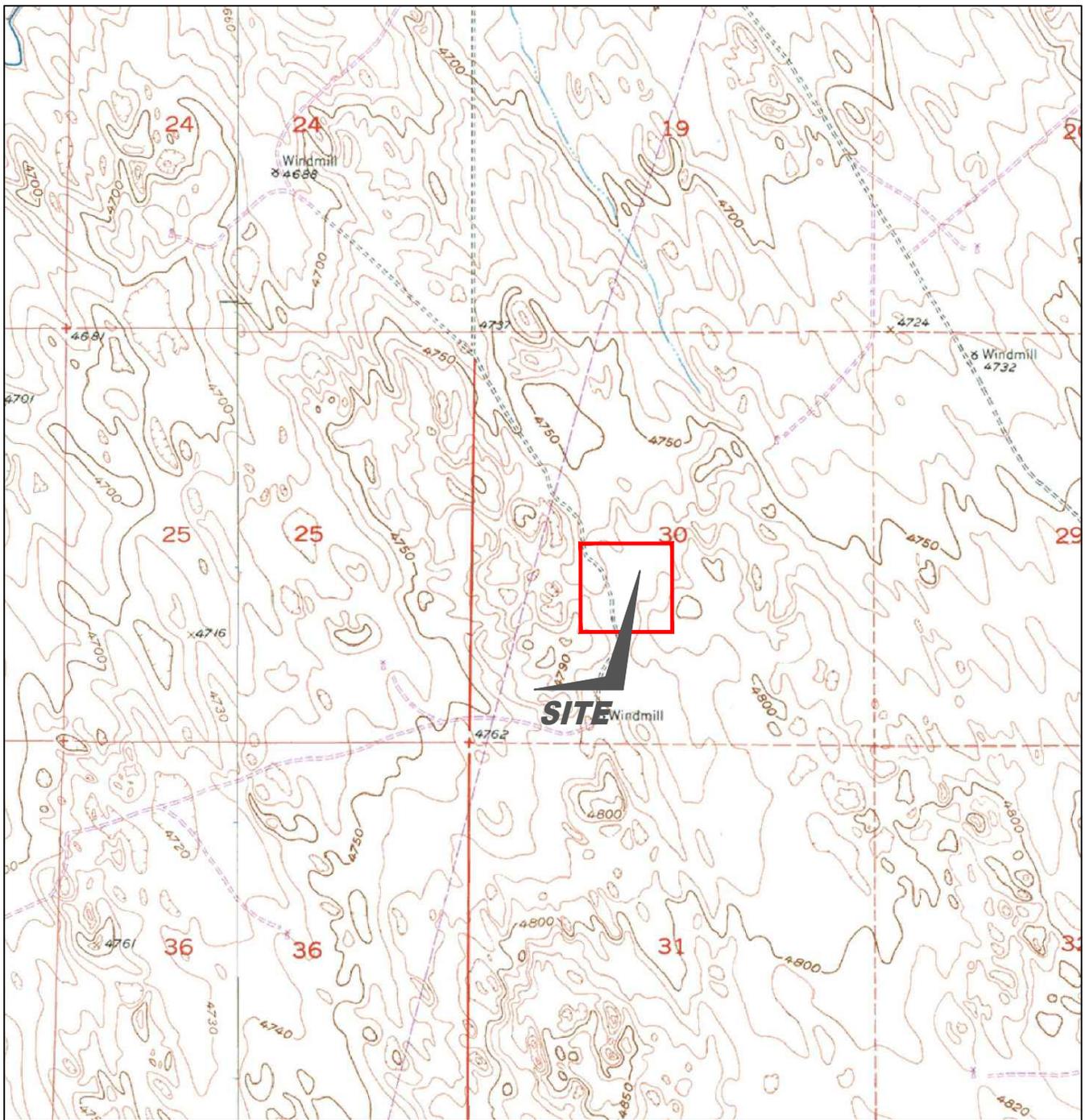
TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
SPIKE STATE CC 30-21, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-160

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
SEPO2@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



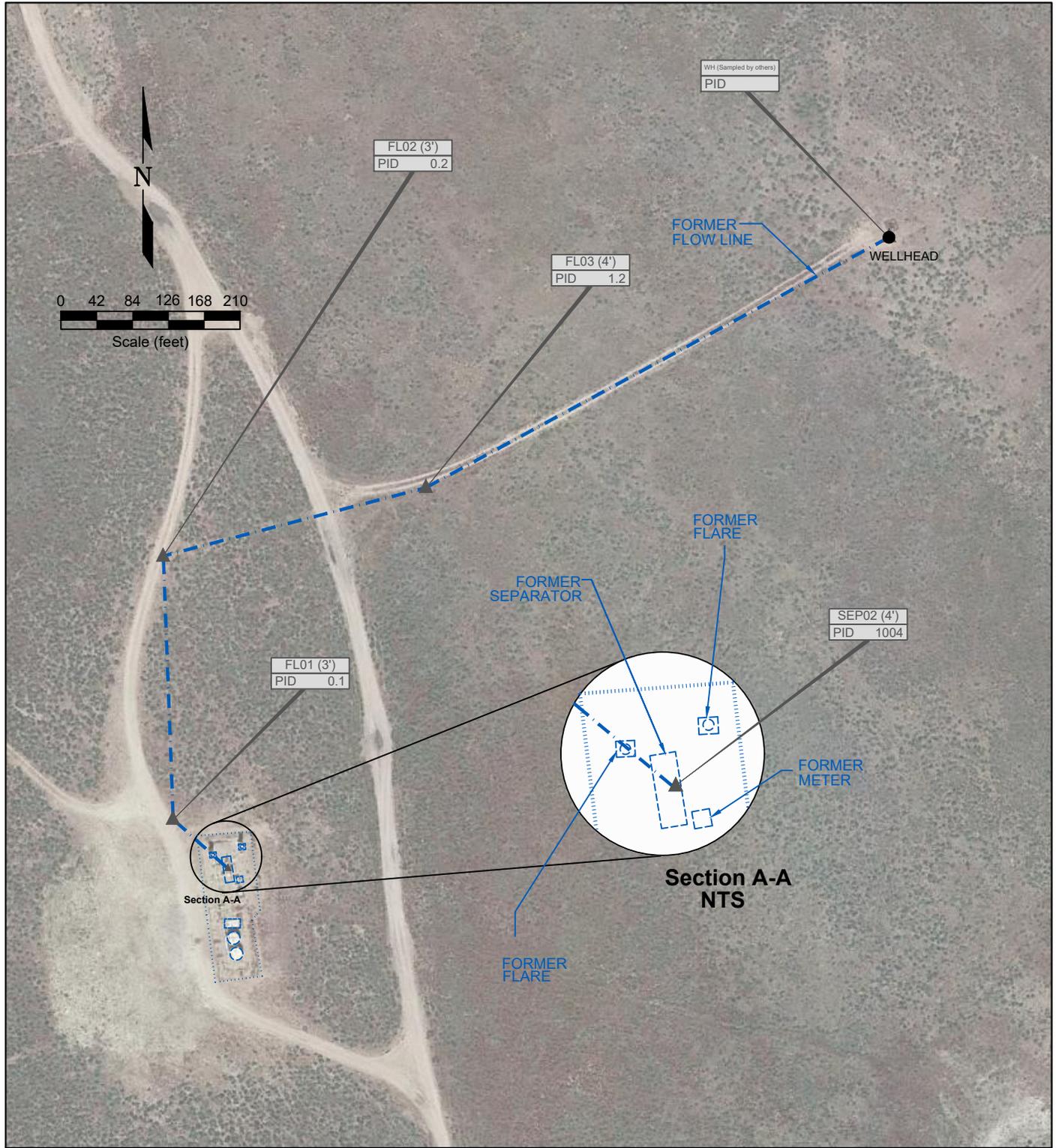
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

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





LEGEND

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

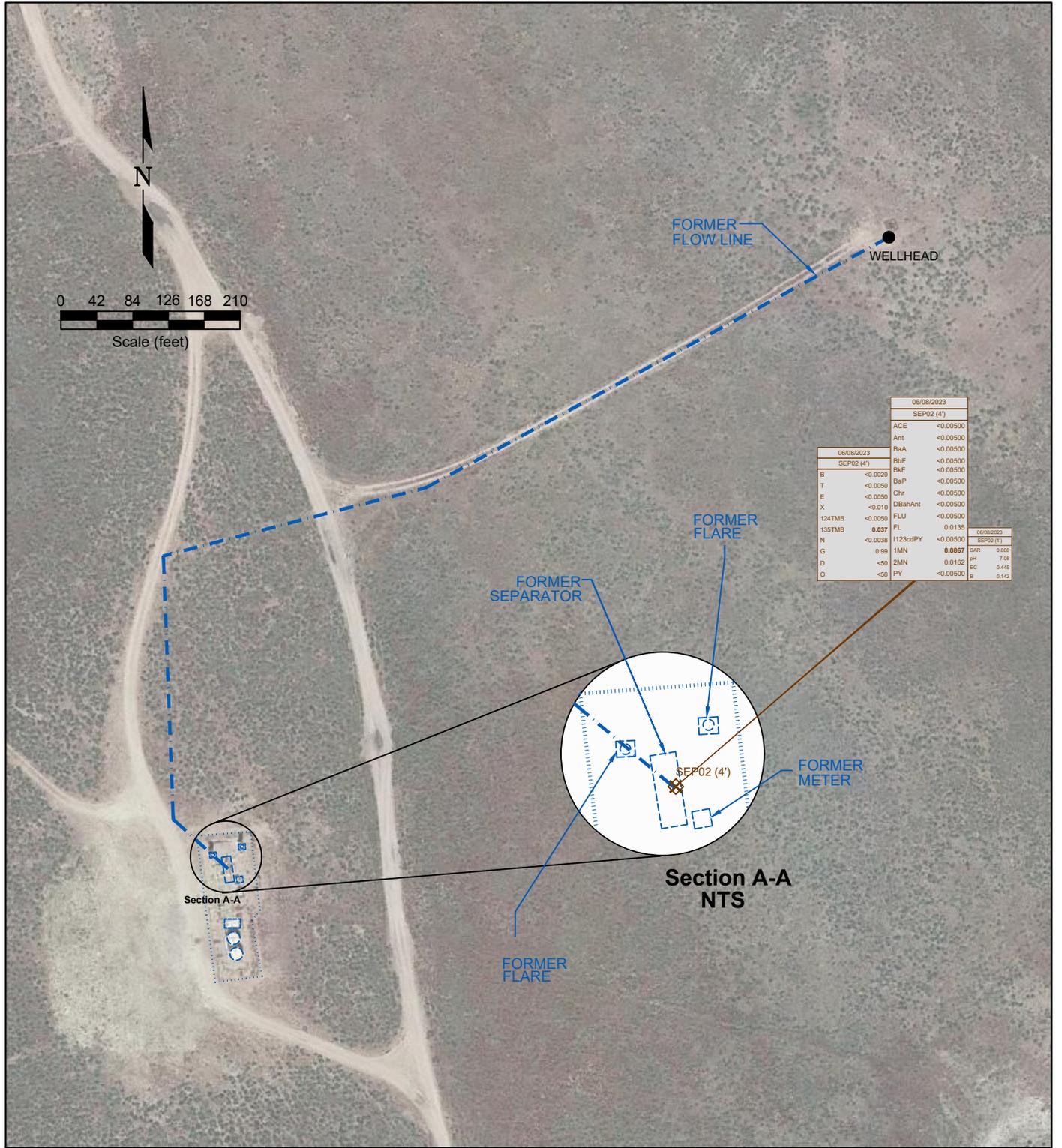
FL01	PID READING LOCATION IDENTIFICATION
PID 0.1	PHOTO IONIZATION DETECTION (ppm)

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
- ⊗ SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- FLOW LINE
- ▤ CONTAINMENT BERM

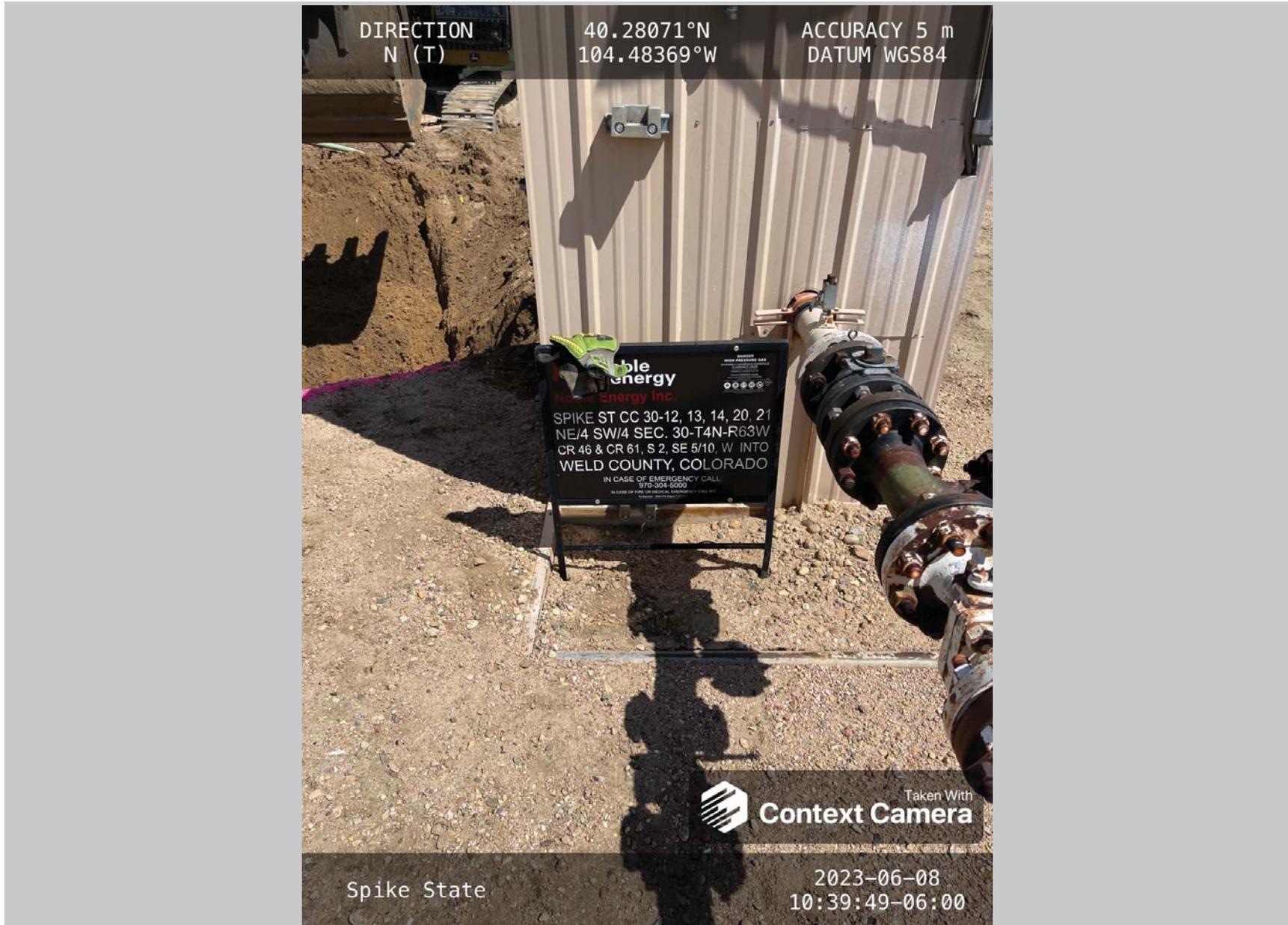
4/7/2023	DATE SAMPLED	4/7/2023	DATE SAMPLED	4/7/2023	DATE SAMPLED
FL01 (4')	SAMPLE ID and DEPTH (ft)	FL01 (4')	SAMPLE ID and DEPTH (ft)	FL01 (4')	SAMPLE ID & DEPTH (ft)
ACE	<0.00500	ACE	<0.00500	SAR	0.990
Ant	<0.00500	ANTHRACENE (mg/kg)	<0.00500	pH	6.94
BaA	<0.00500	BENZO (A) ANTHRACENE (mg/kg)	<0.010	EC	0.385
BaF	<0.00500	BENZO (B) FLUORANTHENE (mg/kg)	<0.00500	BGRON	0.255
BaP	<0.00500	BENZO (K) FLUORANTHENE (mg/kg)	<0.010		
BaP	<0.00500	BENZO (A) PYRENE (mg/kg)	<0.00500	[NA]	NOT ANALYZED
Chr	<0.00500	CHRYSENE (mg/kg)	<0.00500		
DBahAnt	<0.00500	DIBENZ (A,H) ANTHRACENE (mg/kg)	<0.00500		
FLU	<0.00500	FLUORANTHENE (mg/kg)	<0.50		
FL	<0.00500	FLUORENE (mg/kg)	<50		
I123cdPY	<0.00500	INDENO (1,2,3-CD) PYRENE (mg/kg)	<50		
1MN	<0.00500	1-METHYLNAPHTHALENE (mg/kg)	<50		
2MN	<0.00500	2-METHYLNAPHTHALENE (mg/kg)	<50		
PY	<0.00500	PYRENE (mg/kg)	<50		

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

Photo Log



Description:

Facility Placard

Photo Log



DIRECTION
NE (T)

40.28073°N
104.48377°W

ACCURACY 5 m
DATUM WGS84



Taken With
Context Camera

Spike State

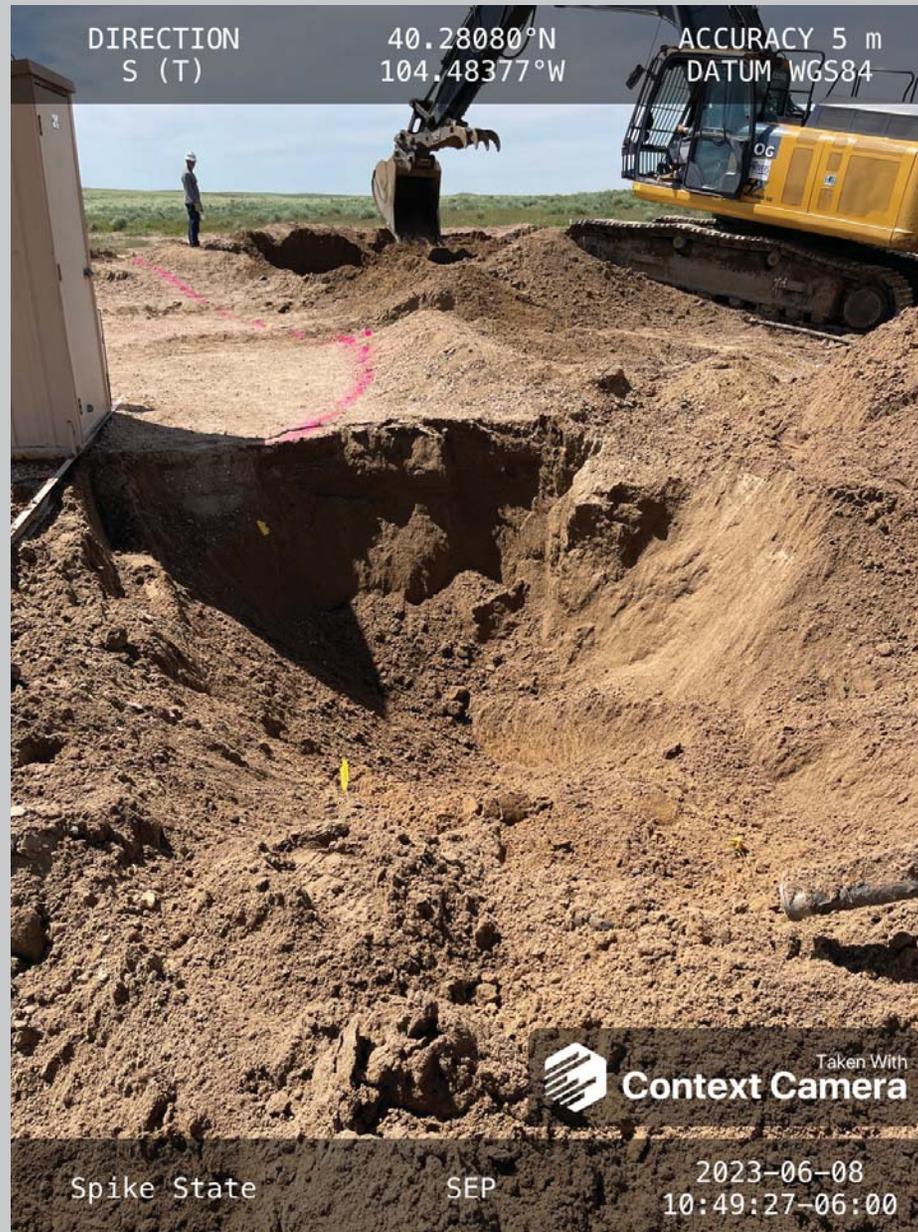
SEP

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

Description:

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

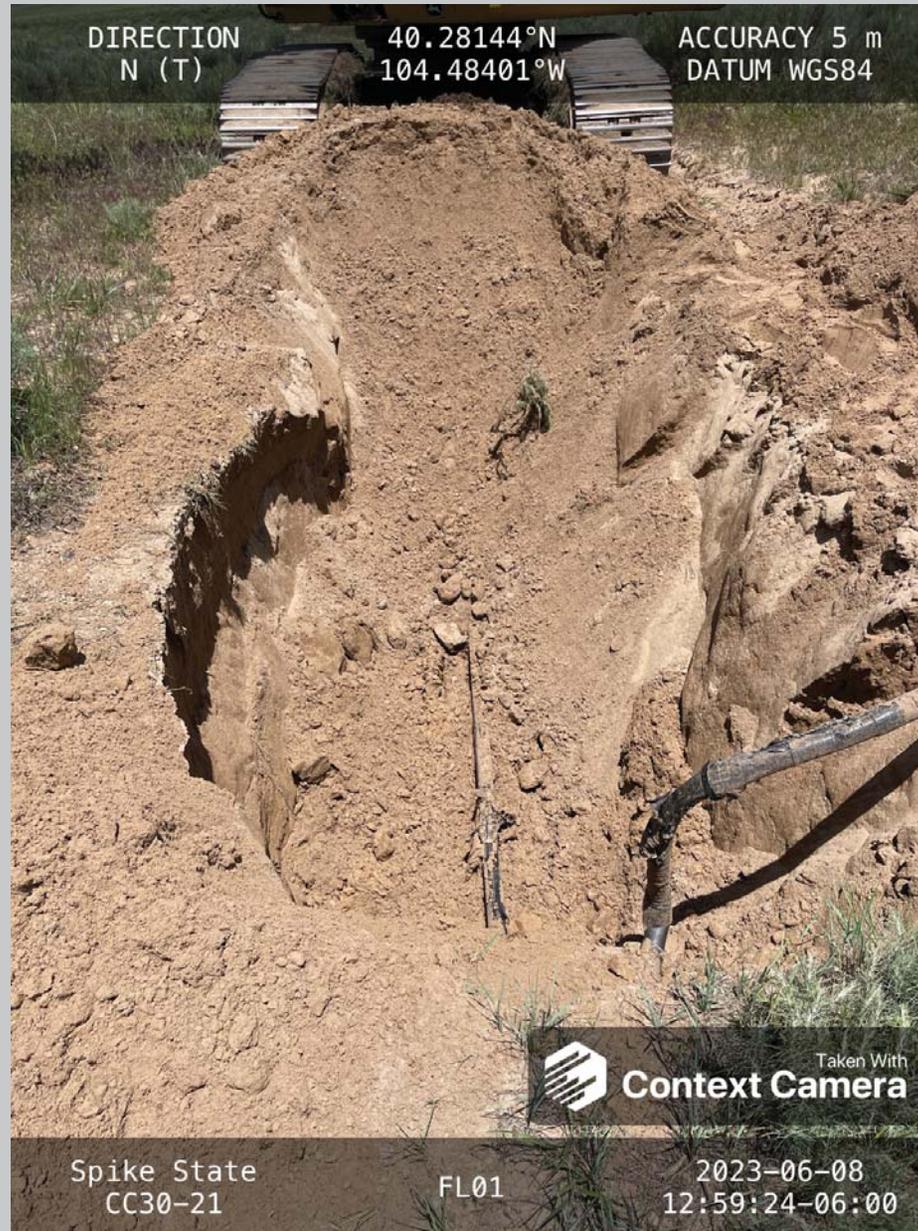
Photo Log



Description:

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

Photo Log



Description:

Spike State 30-20 & 21 FL01@3'

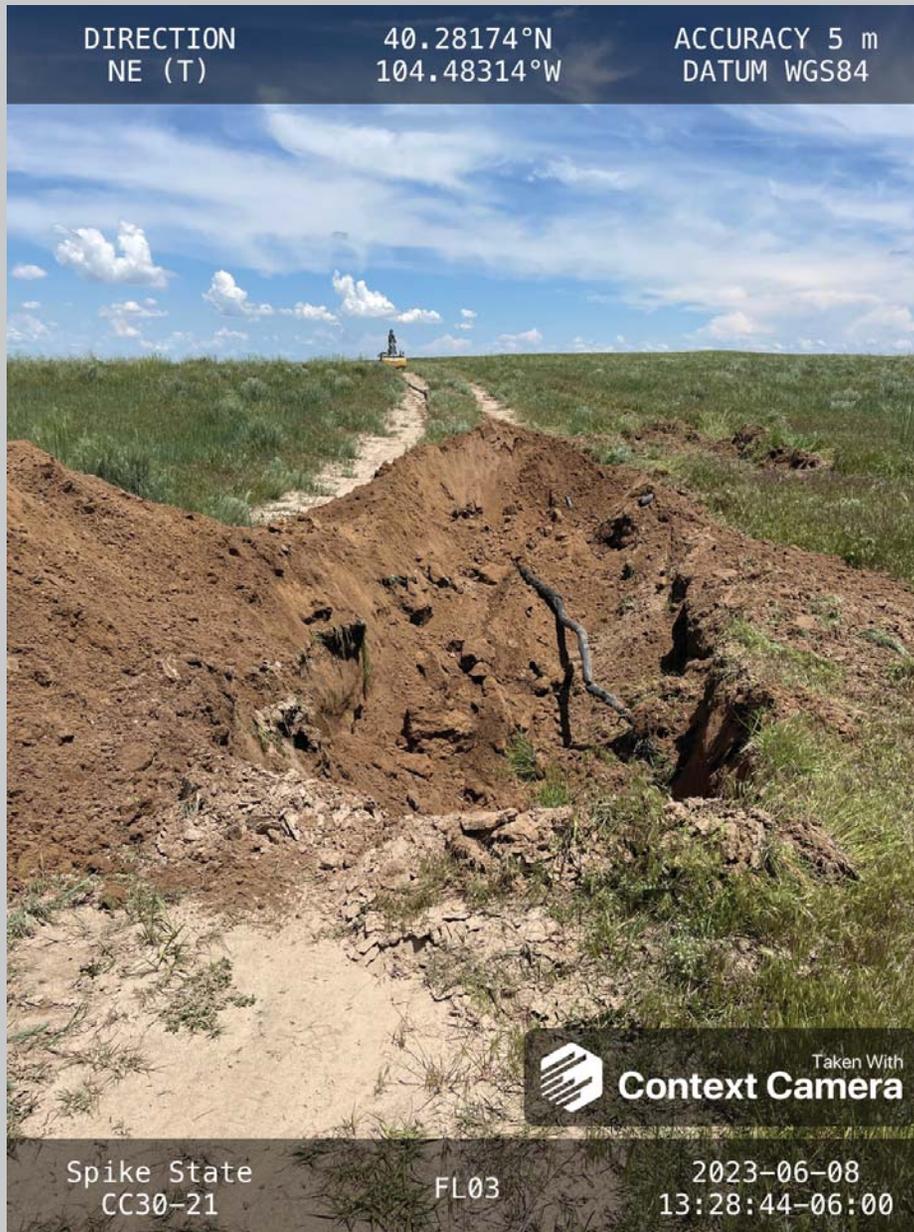
Photo Log



Description:

Spike State 30-20&21 FL02@3'

Photo Log



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

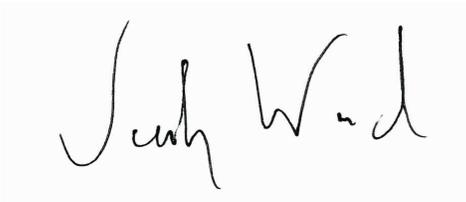
Wellington, CO 80549

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 blue ink that reads "Jacob Wood". The signature is written in a cursive style with a large initial "J" and a distinct "W".

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

2306210

S₂

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

Page 1 of 1

Client: Fremont Environmental

Project Manager: Paul Henehan

Address:

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 CL30-20 TB

Sampler Name: Chris Lattes

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix				Analysis Requested						Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	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: Chris Lattes	Date/Time: 6/12/23 12:15	Received by: S2	Date/Time: 6/12/23 12:15	Turn Around Time (Check)	Notes: FL+ FAC "Spike" on Containers
Relinquished by: S2	Date/Time: 6/12/23 12:15	Received by: [Signature]	Date/Time: 6/12/23 12:15	Same Day _____ 72 hours	
Relinquished by:	Date/Time:	Received by:	Date/Time:	24 hours _____ Standard <input checked="" type="checkbox"/>	

Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours _____	Sample Integrity:	Temperature Upon Receipt: 143
				Sample Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No		

S₂

Sample Receipt Checklist

S2 Work Order# 2306210

Client: Fremont Client Project ID: Spike State CC30-20 TB

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

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.	-			on ice
If custody seals are present, are they intact? ⁽¹⁾	-			
Are samples due within 48 hours present?		-		
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		-		
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾		-		
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	-			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	✓			
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				

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

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

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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

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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

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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

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	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	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	0.0364	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 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	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 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	0.0202	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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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

AST01@1'
2306210-02 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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

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

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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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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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

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

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	0.0210	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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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

PWVB01@6'
2306210-05 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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	0.0202	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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 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

PWVW01@5'
2306210-06 (Soil)

Summit Scientific

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0382		"	0.0400		95.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0380		"	0.0400		95.0	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0333		"	0.0400		83.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0385		"	0.0400		96.3	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	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			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0348		"	0.0400		86.9	50-150			
<i>Surrogate: Toluene-d8</i>	0.0378		"	0.0400		94.5	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	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 Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

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

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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -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

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

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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0279		"	0.0333		83.6	40-150			
<i>Surrogate: Fluoranthene-d10</i>	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			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	0.0294		"	0.0333		88.2	40-150			
<i>Surrogate: Fluoranthene-d10</i>	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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0151</i>		<i>"</i>	<i>0.0333</i>		<i>45.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0139</i>		<i>"</i>	<i>0.0333</i>		<i>41.6</i>	<i>40-150</i>			

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	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0174</i>		<i>"</i>	<i>0.0333</i>		<i>52.3</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0208</i>		<i>"</i>	<i>0.0333</i>		<i>62.5</i>	<i>40-150</i>			

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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

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

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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 Result	%REC		RPD		Notes
		Limit	Units			%REC	Limits	RPD	Limit	

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
 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 - Quality Control

Summit Scientific

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

Batch BGF0469 - General Preparation

Duplicate (BGF0469-DUP1)		Source: 2305670-04			Prepared & Analyzed: 06/13/23			
% Solids	76.8		%		77.6		1.02	20

Summit Scientific



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Fremont Environmental
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 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		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

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	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD		

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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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

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