

FREMONT ENVIRONMENTAL INC.

May 19, 2023

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

Subject: **Flowline Closure Data Submittal**
Kissler 3X Flowline
API # 05-123-13005
SESW Sec. 23, T4N, R64W
Weld County, Colorado
Fremont Project No. C023-074
Remediation #25952

Dear Mr. Peterson:

As requested, Fremont Environmental Inc. (Fremont) personnel conducted flowline abandonment activities at the Noble Energy Inc. (Noble) Kissler 3X Flowline. Details of the flowline abandonment activities are documented in the attached Closure Report. Groundwater was not encountered during decommissioning 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.

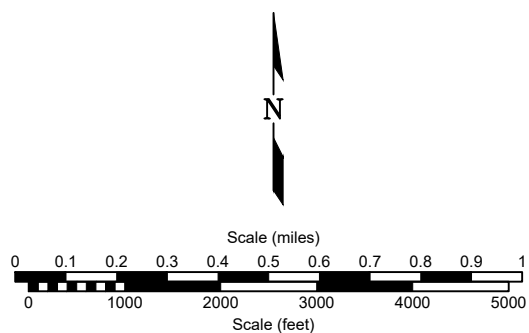
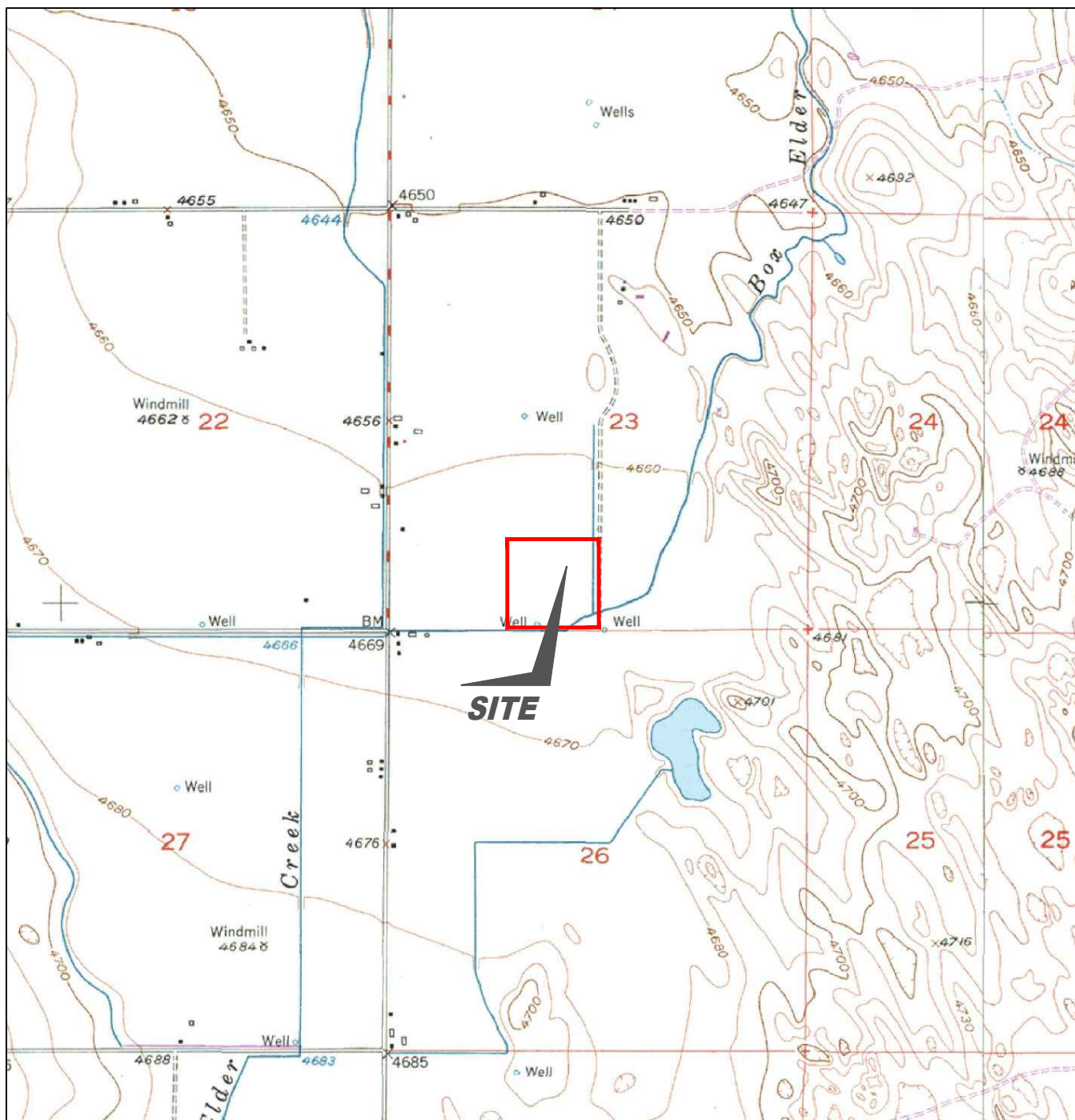


Chris Lattes
Consultant

Attachments:

Figures
Tables
Flowline Closure Checklist
Photos
Laboratory Reports

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



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY INC - KISSLER 3X
SESW Sec. 23, T4N, R64W, 6th PM
 Weld County, Colorado
 40.292150°, -104.520370°

Project No. CO23-074	API # 05-123-13005	Facility #
Date 07/25/2023	Remediation # 25952	Filename 23074T





LEGEND

● WELLHEAD LOCATION	▲ PID READING LOCATION	○ ABOVE GROUND STORAGE TANK	FORMER FACILITY	FORMER FLOW LINE
			BUILDING	ABANDONED IN PLACE
				CONTAINMENT EERM
				FENCE LINE

SAMPLE IDENTIFICATION AND DEPTH (ft)
PHOTO IONIZATION DETECTION / PARTS PER MILLION

Figure 2
SITE MAP

NOBLE ENERGY INC - KISSLER 3X
SESW Sec. 23, T4N, R64W, 6th PM
 Weld County, Colorado
 40.292150°, -104.520370°

Project No. CO23-074	API # 05-123-13005	Facility #
Date 9/7/23	Remediation # 25952	Filename 23074Q





LEGEND

- WELLHEAD LOCATION
- SOIL SAMPLE LOCATION

- ABOVE GROUND STORAGE TANK

- FORMER FACILITY
- BUILDING BUILDING

- FORMER FLOW LINE
- ABANDONED IN PLACE
- CONTAINMENT EERM
- FENCE LINE

DATE SAMPLED	SAMPLE ID and DEPTH (ft)
3/7/2023	SEP01 (4')
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BaP	<0.00500
BaP	<0.00500
BaP	<0.00500
Chr	<0.00500
DBaA	<0.00500
FLU	<0.00500
FL	<0.00500
1123cPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

DATE SAMPLED	SAMPLE ID and DEPTH (ft)
3/9/2023	14FL01 (6.0')
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BaP	<0.00500
BaP	<0.00500
Chr	<0.00500
DBaA	<0.00500
FLU	<0.00500
FL	<0.00500
1123cPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

DATE SAMPLED	SAMPLE ID and DEPTH (ft)
3/9/2023	14FL01 (6.0')
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BaP	<0.00500
BaP	<0.00500
Chr	<0.00500
DBaA	<0.00500
FLU	<0.00500
FL	<0.00500
1123cPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

DATE SAMPLED	SAMPLE ID and DEPTH (ft)
3/9/2023	14FL01 (6.0')
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BaP	<0.00500
BaP	<0.00500
Chr	<0.00500
DBaA	<0.00500
FLU	<0.00500
FL	<0.00500
1123cPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

DATE SAMPLED	SAMPLE ID and DEPTH (ft)
3/9/2023	14FL01 (6.0')
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BaP	<0.00500
BaP	<0.00500
Chr	<0.00500
DBaA	<0.00500
FLU	<0.00500
FL	<0.00500
1123cPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

DATE SAMPLED	SAMPLE ID and DEPTH (ft)
3/9/2023	14FL01 (6.0')
ACE	<0.00500
Ant	<0.00500
BaA	<0.00500
BaP	<0.00500
BaP	<0.00500
Chr	<0.00500
DBaA	<0.00500
FLU	<0.00500
FL	<0.00500
1123cPY	<0.00500
1MN	<0.00500
2MN	<0.00500
PY	<0.00500

Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY INC - KISSLER 3X
SESW Sec. 23, T4N, R64W, 6th PM
 Weld County, Colorado
 40.292150°, -104.520370°

Project No.
CO23-074

API #
05-123-13005

Facility #

Date
9/7/23

Remediation #
25952

Filename
23074Q



TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY, INC.
KISSLER 3X, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-074

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**		
SEP01@4'	03/08/2023	4	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.5	<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

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY, INC.
KISSLER 3X, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-074

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
SEP01@4'	03/08/2023	4	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the COGCC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY, INC.
KISSLER 3X, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-074

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
SEP01@4'	03/08/2023	4	8.02	0.412	1	0.497

Bold faced values exceed the COGCC Table 915-1 concentrations

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

TABLE 4
SUMMARY OF POTHOLE FIELD OBSERVATIONS
NOBLE ENERGY, INC.
KISSLER 3X, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-074

Location	Latitude	Longitude	PID Reading	Field Observations
SEP01@4'	40.29115	-104.527106	1.2	No suspected impacts.
SEP02@5'	40.291177	-104.52711	0.1	No suspected impacts.
FL01@4'	40.29101	-104.520393	0.4	No suspected impacts.
FL02@5'	40.291206	-104.520397	0.7	No suspected impacts.
FL03@4'	40.291577	-104.520388	0.5	No suspected impacts.
FL04@4'	40.291889	-104.520386	0.4	No suspected impacts.

TABLE 5
SUMMARY OF FLOW LINE CONDITION
NOBLE ENERGY, INC.
KISSLER 3X, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-074

START	STOP	FOOTAGE	PIPE TYPE AND CONDITION
SEP01@4'	FL01@4'	1979	2" steel, abandoned in place.
FL01@4'	FL02@5'	72	2" steel, good condition.
FL02@5'	FL03@4'	112	2" steel, good condition.
FL03@4'	FL04@4'	114	2" steel, good condition.
FL04@4'	WH	94	2" steel, good condition.

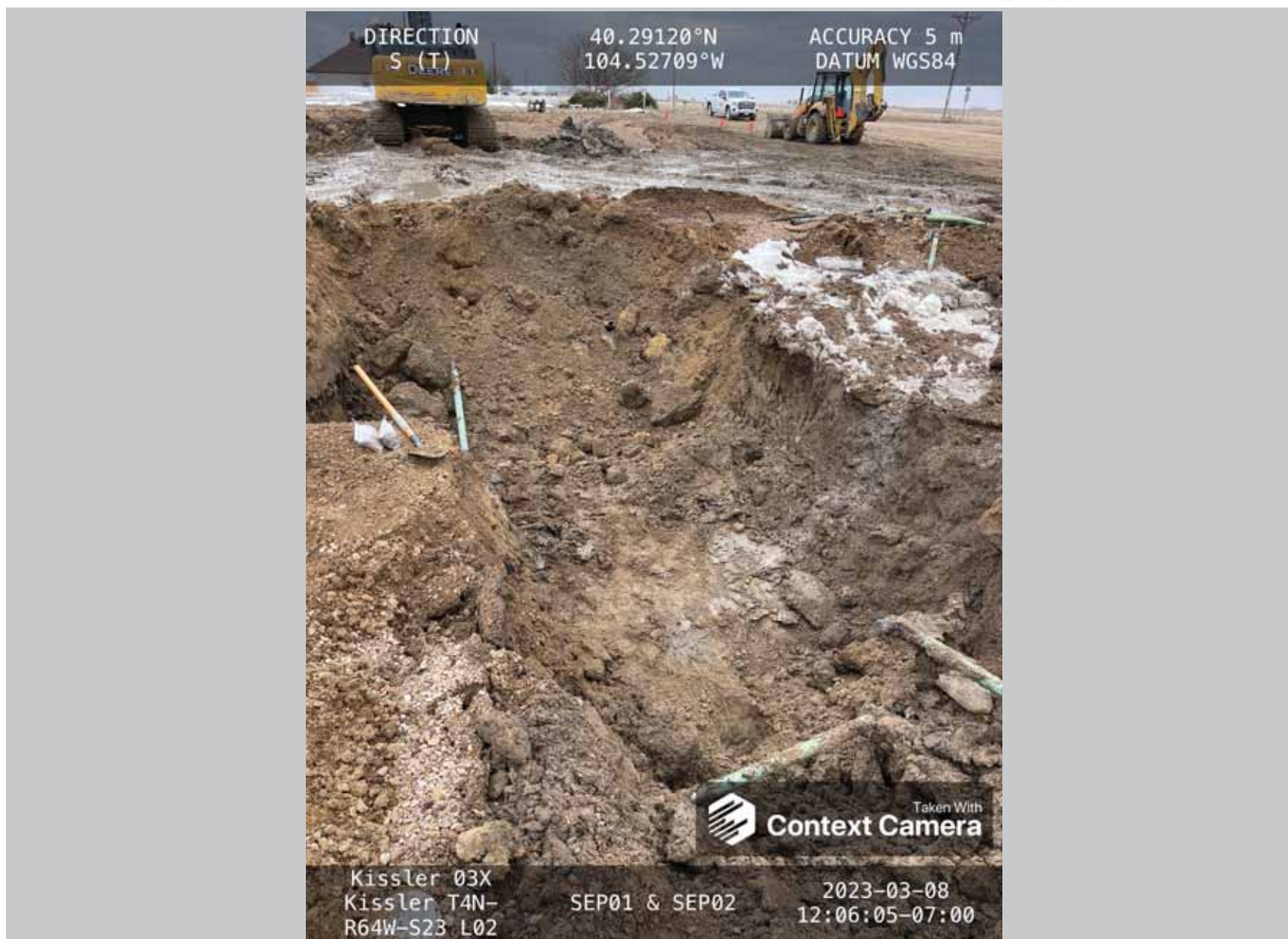
2371 Total linear feet of flow line

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: KISSLER 3X		Date: 3/8/2023						Remediation Project #: 25952
Associated Wells: 05-123-13005		Age of Site: Unknown						Number of Photos Attached: See attached
Starting point: (GPS coordinates and descriptions) 40.292148, -104.520372								
End point: (GPS coordinates and descriptions) 40.291177, -104.527108								
USCS Soil Type: Silty Sand (SM)					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) No observed hydrocarbon impacted soil.								
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	4-5 feet							
Age	Unknown							
Length	2,371 feet							
Construction Material	2" Steel							
Were flowlines pulled?	Partial							
Visual Integrity of lines	Good condition							
Visual impacts if trenched	None observed							
PID Readings if trenched	0.1 - 1.2 ppm							
Sample taken? Location/Sample ID#	See attached figure							
Photo Number(s)	See attached							
Other observations regarding on location flowlines: 1979 feet of flowline were abandoned in place between separator and FL01.								
Summary								
Was impacted soil identified? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes - less than 10 cubic yards <input type="checkbox"/> Yes - more than 10 cubic yards								
Total number of samples field screened: 6					Total number of samples collected: 6			
Highest PID Reading: 1.2					Total number of samples submitted to lab for analysis: 1			
If more than 10 cubic yards of impacted soil were observed: N/A								
Vertical extent:					Estimated spill volume:			
Lateral extent:					Volume of soil removed:			
Is additional investigation required?								
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:								

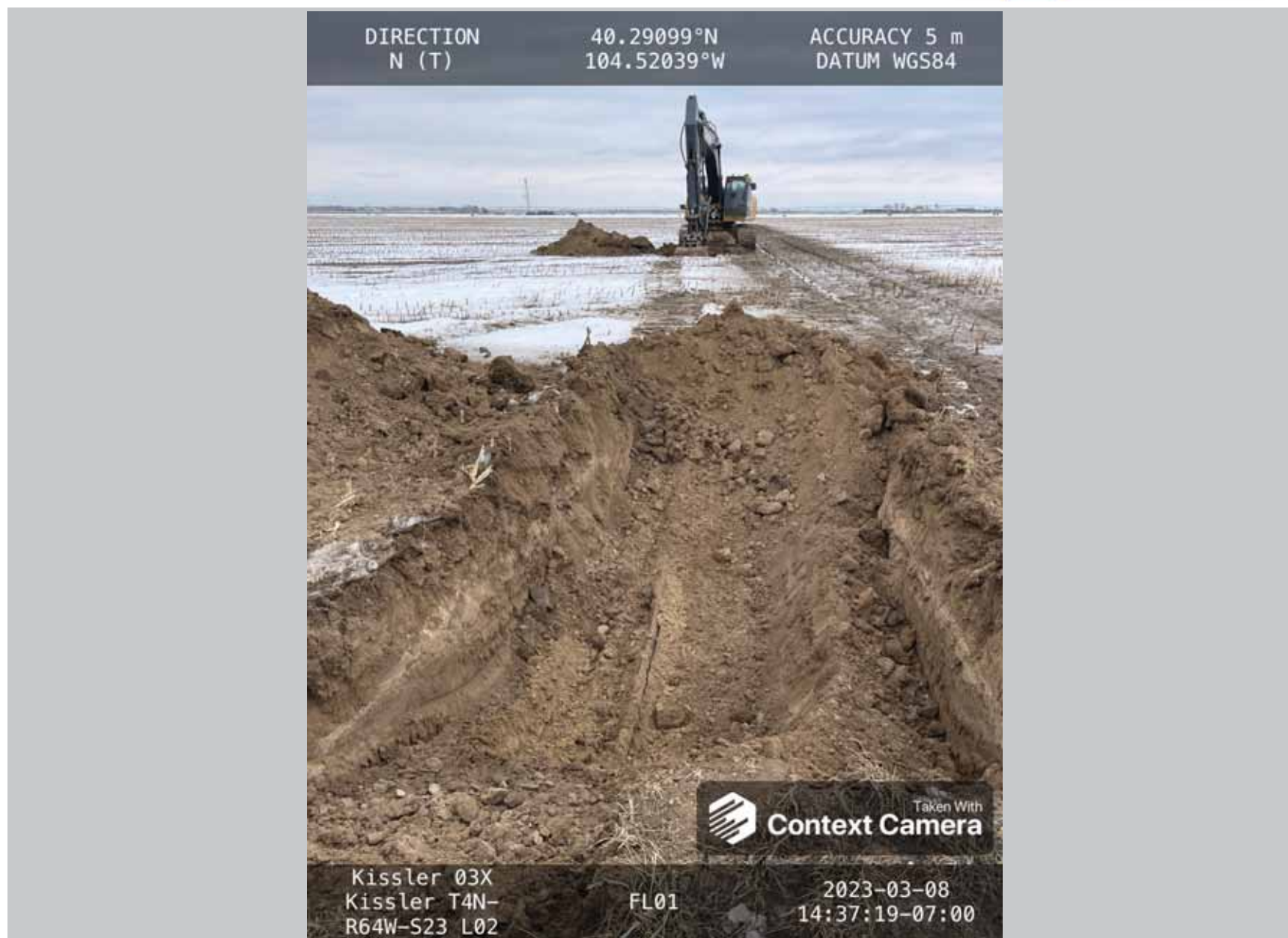
Photo Log



Description:

Separator Excavation Facing S; SEP01@4' (far), SEP02@5' (close)

Photo Log



Description:

FL01@4'

Photo Log



Description:

FL02@5'

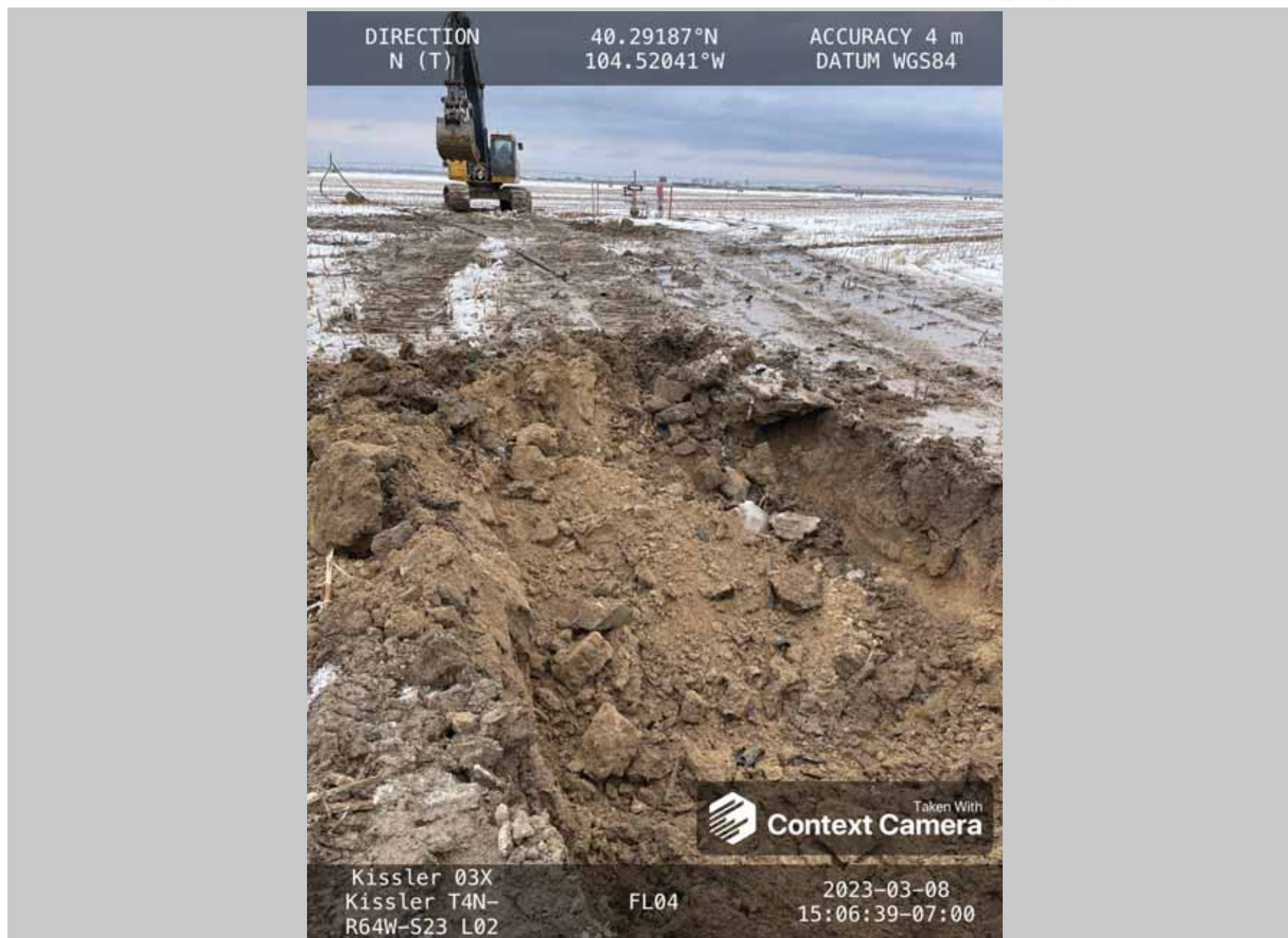
Photo Log



Description:

FL03@4'

Photo Log



Description:

FL04@4'

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 20, 2023

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - Kissler 03x
Work Order #2303231

Enclosed are the results of analyses for samples received by Summit Scientific on 03/09/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henehan

Reported:
03/20/23 12:39

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PWVS01@5'	2303231-01	Soil	03/08/23 00:00	03/09/23 16:30
PWVB01@6.5'	2303231-02	Soil	03/08/23 00:00	03/09/23 16:30
AST01@6"	2303231-03	Soil	03/08/23 00:00	03/09/23 16:30
SRP01@4'	2303231-04	Soil	03/08/23 00:00	03/09/23 16:30

Summit Scientific

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

Summit Scientific

S₂

2303231

4653 Table Mountain Drive ♦ Golden, Colorado 80403

303-277-9310 ♦ 303-374-5933 (F)

Page

of

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

Phone:

Project Name: Kissler 03X

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	PWV SQ1 @ 5'	3/8/23		4			X			X			X	X	X								
2	PWV BQ1 @ 6.5'	↓		1			↓			↓			↓	↓	↓								
3	ASTQ1 @ 6"	↓		1			↓			↓			↓	↓	↓								
4	SEPQ1 @ 4'	3/8/23		2			X			X			X	X	X								
5																							
6																							
7																							
8																							
9																							
10																							

Relinquished by:	Date/Time:	Received by:	Date/Time:	Turn Around Time	(Check)	Notes:
Chris Lattes	3/9/23 4:30	S2	3/9/23 11:30	Same Day	72 hours	
				24 hours	Standard	
Relinquished by:	Date/Time:	Received by:	Date/Time:	48 hours		Kissler 3X FZ + Kissler T4N R64W S23 L92 Fac
S2	3/9/23 10:30	[Signature]	3/9/23 10:30	Sample Integrity:		
Relinquished by:	Date/Time:	Received by:	Date/Time:	Temperature Upon Receipt:	7.6	
				Samples Intact:	Yes	No

S₂

Sample Receipt Checklist

S2 Work Order# 2303231Client: Fremont Client Project ID: Kissler 03XShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐

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

Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 7.6Thermometer # 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"/>	
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 type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

Custodian Printed Name

Date/Time

3/9/23 1630



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

PWVS01@5'
2303231-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGC0291	03/10/23	03/12/23	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	1.2	0.50	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0422	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0496	124 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	210	50	mg/kg	1	BGC0293	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	12.9	103 %	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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

PWVS01@5'
2303231-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	0.0195	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: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 2-Methylnaphthalene-d10	0.0278	83.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0253	76.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Boron	0.655	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/08/23 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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

PWVS01@5'
2303231-01 (Soil)

Summit Scientific

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

Calcium	50.5	0.0594	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	16.3	0.0594	"	"	"	"	"	"
Sodium	19.4	0.0594	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.607	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	84.2		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.553	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.87		pH Units	1	BGC0493	03/16/23	03/17/23	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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

PWVB01@6.5'
2303231-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	0.043	0.0020	mg/kg	1	BGC0291	03/10/23	03/12/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	0.019	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.49	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	0.044	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	4.8	0.50	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0419	105 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0403	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0478	119 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0293	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.5	92.4 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henahan

Reported:
03/20/23 12:39

PWVB01@6.5'
2303231-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0240	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.142	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.162	0.00500	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0238	71.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0205	61.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.812	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

PWVB01@6.5'
2303231-02 (Soil)

Summit Scientific

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

Calcium	30.8	0.0653	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	5.96	0.0653	"	"	"	"	"	"
Sodium	34.0	0.0653	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.47	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.5		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.398	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77		pH Units	1	BGC0493	03/16/23	03/17/23	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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

AST01@6"
2303231-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0291	03/10/23	03/12/23	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: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0415	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0414	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0293	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.0	112 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

AST01@6"
2303231-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0237	71.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0193	58.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.125	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/08/23 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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

AST01@6"
2303231-03 (Soil)

Summit Scientific

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

Calcium	27.4	0.0528	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	10.6	0.0528	"	"	"	"	"	"
Sodium	30.1	0.0528	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.24	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.7		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.222	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.75		pH Units	1	BGC0493	03/16/23	03/17/23	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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henahan

Reported:
03/20/23 12:39

SRP01@4'
2303231-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGC0291	03/10/23	03/12/23	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: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0398	99.4 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0412	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGC0293	03/10/23	03/11/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.2	98.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henahan

Reported:
03/20/23 12:39

SRP01@4'
2303231-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGC0300	03/10/23	03/14/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0277	83.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0191	57.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.497	0.0100	mg/L	1	BGC0382	03/14/23	03/16/23	EPA 6020B	

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

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

SRP01@4'
2303231-04 (Soil)

Summit Scientific

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

Calcium	33.2	0.0573	mg/L dry	1	BGC0438	03/15/23	03/18/23	EPA 6020B
Magnesium	12.8	0.0573	"	"	"	"	"	"
Sodium	26.8	0.0573	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.00	0.00100	units	1	BGC0575	03/18/23	03/18/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.2		%	1	BGC0309	03/10/23	03/13/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.412	0.0100	mmhos/cm	1	BGC0494	03/16/23	03/17/23	EPA 120.1	

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

Date Sampled: **03/08/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.02		pH Units	1	BGC0493	03/16/23	03/17/23	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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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 BGC0291 - EPA 5030 Soil MS

Blank (BGC0291-BLK1)

Prepared: 03/10/23 Analyzed: 03/11/23

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	0.0410		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0391		"	0.0400		97.8	50-150			
Surrogate: 4-Bromofluorobenzene	0.0411		"	0.0400		103	50-150			

LCS (BGC0291-BS1)

Prepared: 03/10/23 Analyzed: 03/11/23

Benzene	0.168	0.0020	mg/kg	0.150		112	70-130			
Toluene	0.166	0.0050	"	0.150		111	70-130			
Ethylbenzene	0.169	0.0050	"	0.150		112	70-130			
m,p-Xylene	0.341	0.010	"	0.300		114	70-130			
o-Xylene	0.164	0.0050	"	0.150		109	70-130			
1,2,4-Trimethylbenzene	0.167	0.0050	"	0.150		111	70-130			
1,3,5-Trimethylbenzene	0.168	0.0050	"	0.150		112	70-130			
Naphthalene	0.151	0.0038	"	0.150		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0416		"	0.0400		104	50-150			
Surrogate: Toluene-d8	0.0402		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0390		"	0.0400		97.5	50-150			

Matrix Spike (BGC0291-MS1)

Source: 2303226-01

Prepared: 03/10/23 Analyzed: 03/11/23

Benzene	0.126	0.0020	mg/kg	0.150	ND	83.7	70-130			
Toluene	0.121	0.0050	"	0.150	ND	80.9	70-130			
Ethylbenzene	0.123	0.0050	"	0.150	ND	82.1	70-130			
m,p-Xylene	0.249	0.010	"	0.300	ND	82.8	70-130			
o-Xylene	0.121	0.0050	"	0.150	ND	80.9	70-130			
1,2,4-Trimethylbenzene	0.122	0.0050	"	0.150	ND	81.4	70-130			
1,3,5-Trimethylbenzene	0.123	0.0050	"	0.150	ND	82.3	70-130			
Naphthalene	0.118	0.0038	"	0.150	ND	78.9	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0389		"	0.0400		97.3	50-150			

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PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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 BGC0291 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0291-MSD1)	Source: 2303226-01			Prepared: 03/10/23 Analyzed: 03/11/23						
Benzene	0.154	0.0020	mg/kg	0.150	ND	103	70-130	20.6	30	
Toluene	0.152	0.0050	"	0.150	ND	101	70-130	22.5	30	
Ethylbenzene	0.154	0.0050	"	0.150	ND	103	70-130	22.2	30	
m,p-Xylene	0.308	0.010	"	0.300	ND	103	70-130	21.2	30	
o-Xylene	0.150	0.0050	"	0.150	ND	100	70-130	21.2	30	
1,2,4-Trimethylbenzene	0.149	0.0050	"	0.150	ND	99.5	70-130	20.1	30	
1,3,5-Trimethylbenzene	0.150	0.0050	"	0.150	ND	100	70-130	19.6	30	
Naphthalene	0.143	0.0038	"	0.150	ND	95.6	70-130	19.1	30	
Surrogate: 1,2-Dichloroethane-d4	0.0426		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0403		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0393		"	0.0400		98.3	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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 BGC0293 - EPA 3550A

Blank (BGC0293-BLK1)

Prepared & Analyzed: 03/10/23

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

LCS (BGC0293-BS1)

Prepared & Analyzed: 03/10/23

C10-C28 (DRO)	451	50	mg/kg	500	90.2		70-130			
Surrogate: o-Terphenyl	13.9		"	12.5	111		30-150			

Matrix Spike (BGC0293-MS1)

Source: 2303226-01

Prepared & Analyzed: 03/10/23

C10-C28 (DRO)	488	50	mg/kg	500	10.5	95.5	70-130			
Surrogate: o-Terphenyl	11.0		"	12.5	88.3		30-150			

Matrix Spike Dup (BGC0293-MSD1)

Source: 2303226-01

Prepared & Analyzed: 03/10/23

C10-C28 (DRO)	434	50	mg/kg	500	10.5	84.7	70-130	11.7	20	
Surrogate: o-Terphenyl	12.5		"	12.5	100		30-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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 BGC0300 - EPA 5030 Soil MS

Blank (BGC0300-BLK1)

Prepared: 03/10/23 Analyzed: 03/13/23

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	0.0254	"	0.0333	76.3	40-150
Surrogate: Fluoranthene-d10	0.0443	"	0.0333	133	40-150

LCS (BGC0300-BS1)

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0357	0.00500	mg/kg	0.0333	107	31-137
Anthracene	0.0344	0.00500	"	0.0333	103	30-120
Benzo (a) anthracene	0.0325	0.00500	"	0.0333	97.6	30-120
Benzo (a) pyrene	0.0300	0.00500	"	0.0333	89.9	30-120
Benzo (b) fluoranthene	0.0338	0.00500	"	0.0333	101	30-120
Benzo (k) fluoranthene	0.0365	0.00500	"	0.0333	109	30-120
Chrysene	0.0314	0.00500	"	0.0333	94.3	30-120
Dibenz (a,h) anthracene	0.0300	0.00500	"	0.0333	90.1	30-120
Fluoranthene	0.0345	0.00500	"	0.0333	103	30-120
Fluorene	0.0343	0.00500	"	0.0333	103	30-120
Indeno (1,2,3-cd) pyrene	0.0306	0.00500	"	0.0333	91.8	30-120
Pyrene	0.0363	0.00500	"	0.0333	109	35-142
1-Methylnaphthalene	0.0344	0.00500	"	0.0333	103	35-142
2-Methylnaphthalene	0.0225	0.00500	"	0.0333	67.4	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0393	"	0.0333	118	40-150
Surrogate: Fluoranthene-d10	0.0343	"	0.0333	103	40-150

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGC0300 - EPA 5030 Soil MS

Matrix Spike (BGC0300-MS1)

Source: 2303046-01

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137		
Anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120		
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120		
Benzo (a) pyrene	0.0202	0.00500	"	0.0333	ND	60.5	30-120		
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.7	30-120		
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.3	30-120		
Chrysene	0.0181	0.00500	"	0.0333	ND	54.3	30-120		
Dibenz (a,h) anthracene	0.0166	0.00500	"	0.0333	ND	49.9	30-120		
Fluoranthene	0.0213	0.00500	"	0.0333	ND	63.8	30-120		
Fluorene	0.0208	0.00500	"	0.0333	ND	62.5	30-120		
Indeno (1,2,3-cd) pyrene	0.0175	0.00500	"	0.0333	ND	52.5	30-120		
Pyrene	0.0217	0.00500	"	0.0333	ND	65.0	35-142		
1-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.7	15-130		
2-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0248		"	0.0333		74.4	40-150		
Surrogate: Fluoranthene-d10	0.0249		"	0.0333		74.8	40-150		

Matrix Spike Dup (BGC0300-MSD1)

Source: 2303046-01

Prepared: 03/10/23 Analyzed: 03/13/23

Acenaphthene	0.0212	0.00500	mg/kg	0.0333	ND	63.6	31-137	0.0236	30
Anthracene	0.0210	0.00500	"	0.0333	ND	63.0	30-120	0.548	30
Benzo (a) anthracene	0.0217	0.00500	"	0.0333	ND	65.2	30-120	0.0445	30
Benzo (a) pyrene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	13.9	30
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.3	30-120	0.723	30
Benzo (k) fluoranthene	0.0204	0.00500	"	0.0333	ND	61.1	30-120	0.399	30
Chrysene	0.0183	0.00500	"	0.0333	ND	54.9	30-120	1.07	30
Dibenz (a,h) anthracene	0.0176	0.00500	"	0.0333	ND	52.7	30-120	5.43	30
Fluoranthene	0.0218	0.00500	"	0.0333	ND	65.5	30-120	2.57	30
Fluorene	0.0209	0.00500	"	0.0333	ND	62.8	30-120	0.351	30
Indeno (1,2,3-cd) pyrene	0.0171	0.00500	"	0.0333	ND	51.2	30-120	2.56	30
Pyrene	0.0223	0.00500	"	0.0333	ND	67.0	35-142	3.05	30
1-Methylnaphthalene	0.0220	0.00500	"	0.0333	ND	65.9	15-130	13.3	50
2-Methylnaphthalene	0.0177	0.00500	"	0.0333	ND	53.2	15-130	1.36	50
Surrogate: 2-Methylnaphthalene-d10	0.0267		"	0.0333		80.1	40-150		
Surrogate: Fluoranthene-d10	0.0245		"	0.0333		73.6	40-150		

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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 BGC0382 - EPA 3050B

Blank (BGC0382-BLK1)

Prepared: 03/14/23 Analyzed: 03/16/23

Boron ND 0.0100 mg/L

LCS (BGC0382-BS1)

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 5.14 0.0100 mg/L 5.00 103 80-120

Duplicate (BGC0382-DUP1)

Source: 2303229-01

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 0.526 0.0100 mg/L 0.540 2.58 20

Matrix Spike (BGC0382-MS1)

Source: 2303229-01

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 5.50 0.0100 mg/L 5.00 0.540 99.2 75-125

Matrix Spike Dup (BGC0382-MSD1)

Source: 2303229-01

Prepared: 03/14/23 Analyzed: 03/16/23

Boron 5.45 0.0100 mg/L 5.00 0.540 98.2 75-125 0.959 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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

Summit Scientific

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

Batch BGC0438 - General Preparation

Blank (BGC0438-BLK1)

Prepared: 03/15/23 Analyzed: 03/18/23

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

LCS (BGC0438-BS1)

Prepared: 03/15/23 Analyzed: 03/18/23

Calcium	5.74	0.0500	mg/L wet	5.00	115	70-130
Magnesium	5.49	0.0500	"	5.00	110	70-130
Sodium	5.02	0.0500	"	5.00	100	70-130

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Fremont Environmental
PO Box 1289
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Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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

Summit Scientific

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

Batch BGC0309 - General Preparation

Duplicate (BGC0309-DUP1)

Source: 2303226-05

Prepared: 03/10/23 Analyzed: 03/13/23

% Solids	89.5	%		91.3		2.03	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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 BGC0494 - General Preparation

Blank (BGC0494-BLK1)

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGC0494-BS1)

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 101 95-105

Duplicate (BGC0494-DUP1)

Source: 2303229-01

Prepared: 03/16/23 Analyzed: 03/17/23

Specific Conductance (EC) 4.42 0.0100 mmhos/cm 4.51 2.04 20

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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 - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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

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

Batch BGC0493 - General Preparation

LCS (BGC0493-BS1)

Prepared: 03/16/23 Analyzed: 03/17/23

pH	9.08	pH Units	9.18	98.9	95-105
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Duplicate (BGC0493-DUP1)

Source: 2303229-01

Prepared: 03/16/23 Analyzed: 03/17/23

pH	7.82	pH Units	7.89	0.891	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Kissler 03x

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/20/23 12:39

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