

FREMONT ENVIRONMENTAL INC.

May 12, 2023

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

Subject: **Flowline Closure Data Submittal**
Volkens 2
API # 05- 123-12105
NENW Sec. 23, T4N, R64W
Weld County, Colorado
Fremont Project No. C023-069
Remediation # 25964

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Flowline Closure activities for the Noble Energy Inc. (Noble) Volkens 2. Impacted soil was not encountered during abandonment activities. Details of the Volkens 2 flowline closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (603) 477-6907 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Ethan D. Black, P.G.
Consultant

Attachments:

- Facility Closure Checklist
- Tables
- Figures
- Photos
- Laboratory Reports

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

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
VOLKENS 2 , WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-069

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)
ECMC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
FL Riser 2ft	03/03/2023	2	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the ECMC 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.
VOLKENS 2 , WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-069

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)
ECMC 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
ECMC 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
FL Riser 2ft	03/03/2023	2	<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 ECMC 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

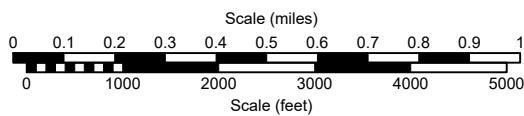
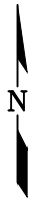
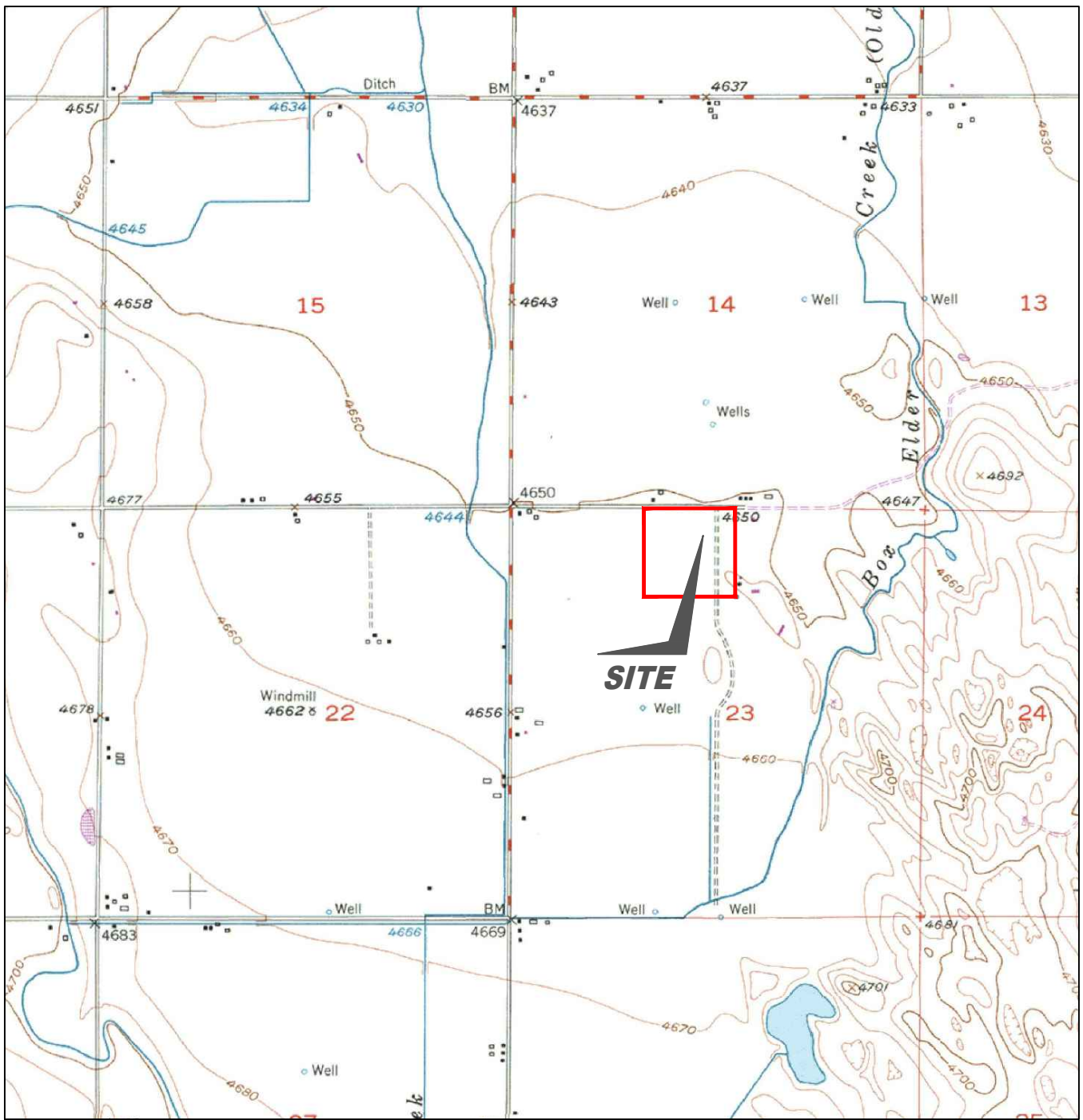
NA - Not analyzed

TABLE 3
SUMMARY OF POTHOLE FIELD OBSERVATIONS
NOBLE ENERGY INC.
VOLKENS 2, WELD COUNTY, COLORADO
FREMONT PROJECT C023-029

Location	Latitude	Longitude	PID Reading	Field Observations
Wellhead	40.303352	-104.520264	0.0	No impacts observed
FL Riser 2 Ft	40.30506	-104.51847	0.0	No impacts observed

TABLE 4
SUMMARY OF FLOWLINE CONDITION
NOBLE ENERGY INC.
VOLKENS 2, WELD COUNTY, COLORADO
FREMONT PROJECT C023-029

START	STOP	FOOTAGE	PIPE TYPE AND CONDITION
Wellhead	FL Riser 2 Ft	805	2" SCH. 80 steel, Non-ACM TGF coating, good condition
		805	Total linear feet of flow line



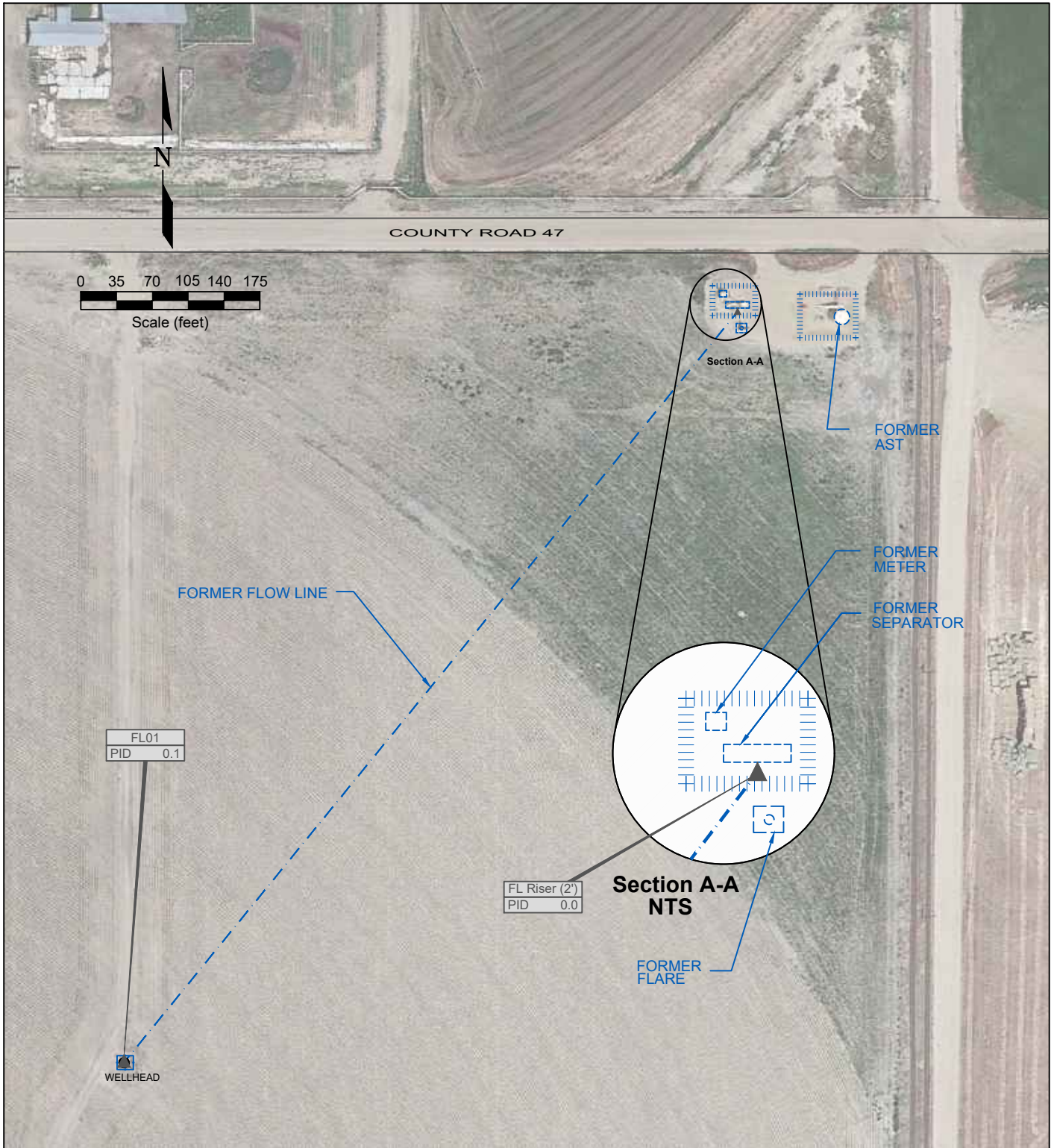
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY INC - VOLKENS 2
 NENW Sec. 23, T4N, R64W, 6th PM
 Weld County, Colorado
 40.303360°, -104.520270°

Project # CO23-069	API # 05-123-12105	Facility #
Date 09/06/2023	Remediation # 25964	Filename 23069T





LEGEND

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

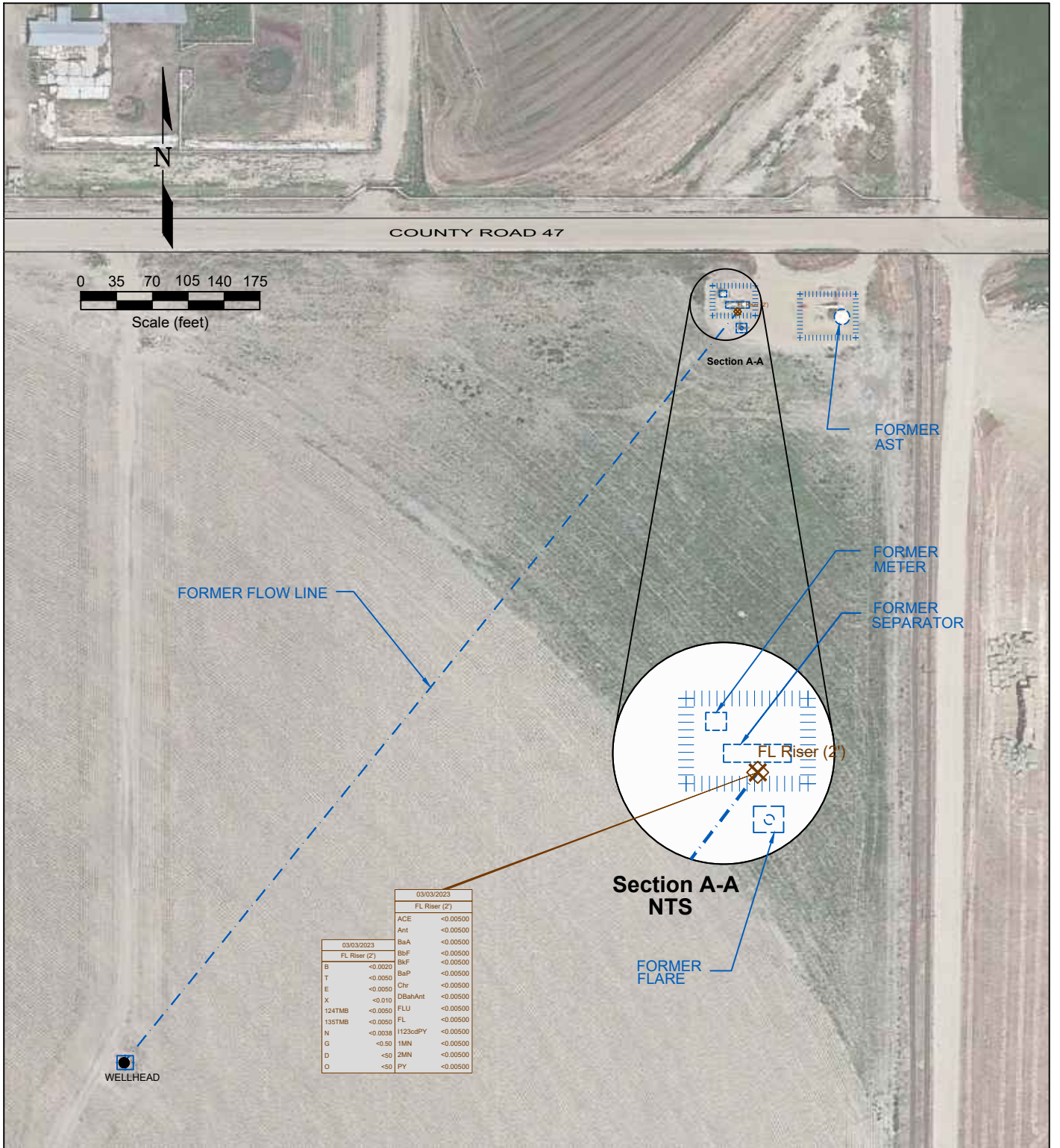
FL01 PID READING LOCATION IDENTIFICATION
 PID 0.1 PHOTO IONIZATION DETECTION (ppm)

**Figure 2
 SITE MAP**

NOBLE ENERGY INC - VOLKENS 2
 NENW Sec. 23, T4N, R64W, 6th PM
 Weld County, Colorado
 40.303360°, -104.520270°

Project # CO23-069	API # 05-123-12105	Facility #
Date 09/06/2023	Remediation # 25964	Filename 23069Q





LEGEND

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

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	ACENAPHTHENE (mg/kg)	B	BENZENE (mg/kg)	SAR	SAR (units)
Ant	ANTHRACENE (mg/kg)	T	TOLUENE (mg/kg)	pH	pH (units)
BaA	BENZO (A) ANTHRACENE (mg/kg)	E	ETHYLBENZENE (mg/kg)	EC	EC (mmhos/cm)
BbF	BENZO (B) FLUORANTHENE (mg/kg)	X	TOTAL XYLENES (mg/kg)	BCOR	BCOR (mg/L)
BkF	BENZO (K) FLUORANTHENE (mg/kg)	124TMB	1,2,4-TRIMETHYLBENZENE (mg/kg)		
BaP	BENZO (A) PYRENE (mg/kg)	135TMB	1,3,5-TRIMETHYLBENZENE (mg/kg)	[NA]	NOT ANALYZED
Chr	CHRYSENE (mg/kg)	N	NAPHTHALENE (mg/kg)		
DBahAnt	DIBENZ (A,H) ANTHRACENE (mg/kg)	G	TPH-GRO (mg/kg)		
FLU	FLUORANTHENE (mg/kg)	D	TPH-DRO (mg/kg)		
FL	FLUORENE (mg/kg)	O	TPH-ORO (mg/kg)		
1123cdPY	INDENO (1,2,3-CD) PYRENE (mg/kg)				
1MN	1-METHYLNAPHTHALENE (mg/kg)				
2MN	2-METHYLNAPHTHALENE (mg/kg)				
PY	PYRENE (mg/kg)				

Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY INC - VOLKENS 2
 NENW Sec. 23, T4N, R64W, 6th PM
 Weld County, Colorado
 40.303360°, -104.520270°

Project # CO23-069	API # 05-123-12105	Facility #	
Date 09/06/2023	Remediation # 25964	Filename 23069Q	

Photo Log



Description:

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 15, 2023

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549
RE: Noble - Volkens 2
Work Order #2303236

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,



Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Volkens 2

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/15/23 16:21

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL Riser 2ft	2303236-01	Soil	03/03/23 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

2303236

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 : DAN

Phone:

Project Name: Noble - Volkens 2

Sampler Name: EB

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	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, pH, Boron	Metals (915)		TDS, Chloride, Sulfate	HOLD
1	FL RISER 2FT	3/3/23		2			X			X			X	X	X					
2	BKG 3FT	L		2			X			X					X	X				X
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Relinquished by: <i>Ethan Black</i>	Date/Time: 3/3/23 1620	Received by: S ₂	Date/Time: 3/9/23 1630	Turn Around Time (Check) Same Day — 72 hours 24 hours — Standard <input checked="" type="checkbox"/> 48 hours — Sample Integrity: Temperature Upon Receipt: 8.0 Samples Intact: <input checked="" type="checkbox"/> Yes No	Notes:
Relinquished by: S ₂	Date/Time: 3/9/23 1020	Received by: <i>[Signature]</i>	Date/Time: 3/9/23 1020		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S₂

Sample Receipt Checklist

S2 Work Order# 2303236Client: Fremont Client Project ID: Noble-Volkens 2Shipped 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) Thermometer #

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on ICE
If custody seals are present, are they intact? ⁽¹⁾	<input 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.

[Signature]
Custodian Printed Name

3/9/23 1630
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Volkens 2

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/15/23 16:21

FL Riser 2ft
2303236-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BGC0336	03/13/23	03/14/23	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: **03/03/23 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	0.0396	99.0 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0423	106 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BGC0339	03/13/23	03/14/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

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

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	12.5	100 %		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 - Volkens 2

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 03/15/23 16:21

FL Riser 2ft
2303236-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

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

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Acenaphthene	ND	0.00500	mg/kg	1	BGC0289	03/10/23	03/11/23	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: **03/03/23 00:00**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 2-Methylnaphthalene-d10	0.0278	83.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0155	46.6 %	40-150		"	"	"	"	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Volkens 2

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/15/23 16:21

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 BGC0336 - EPA 5030 Soil MS

Blank (BGC0336-BLK1)

Prepared & Analyzed: 03/13/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0389		"	0.0400		97.4	50-150			
Surrogate: Toluene-d8	0.0392		"	0.0400		98.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0428		"	0.0400		107	50-150			

LCS (BGC0336-BS1)

Prepared: 03/13/23 Analyzed: 03/14/23

Benzene	0.0909	0.0020	mg/kg	0.125		72.7	70-130			
Toluene	0.105	0.0050	"	0.125		83.7	70-130			
Ethylbenzene	0.133	0.0050	"	0.125		107	70-130			
m,p-Xylene	0.267	0.010	"	0.250		107	70-130			
o-Xylene	0.124	0.0050	"	0.125		99.1	70-130			
1,2,4-Trimethylbenzene	0.146	0.0050	"	0.125		117	70-130			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.125		117	70-130			
Naphthalene	0.0997	0.0038	"	0.125		79.7	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0409		"	0.0400		102	50-150			
Surrogate: Toluene-d8	0.0400		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

Matrix Spike (BGC0336-MS1)

Source: 2303235-01

Prepared: 03/13/23 Analyzed: 03/14/23

Benzene	0.0905	0.0020	mg/kg	0.125	ND	72.4	70-130			
Toluene	0.106	0.0050	"	0.125	ND	84.9	70-130			
Ethylbenzene	0.134	0.0050	"	0.125	ND	107	70-130			
m,p-Xylene	0.265	0.010	"	0.250	ND	106	70-130			
o-Xylene	0.126	0.0050	"	0.125	ND	101	70-130			
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.125	ND	118	70-130			
1,3,5-Trimethylbenzene	0.146	0.0050	"	0.125	ND	117	70-130			
Naphthalene	0.110	0.0038	"	0.125	ND	88.2	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0422		"	0.0400		106	50-150			
Surrogate: Toluene-d8	0.0406		"	0.0400		101	50-150			
Surrogate: 4-Bromofluorobenzene	0.0404		"	0.0400		101	50-150			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Volkens 2

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 03/15/23 16:21

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 BGC0336 - EPA 5030 Soil MS

Matrix Spike Dup (BGC0336-MSD1)	Source: 2303235-01			Prepared: 03/13/23 Analyzed: 03/14/23						
Benzene	0.0899	0.0020	mg/kg	0.125	ND	71.9	70-130	0.732	30	
Toluene	0.106	0.0050	"	0.125	ND	84.5	70-130	0.482	30	
Ethylbenzene	0.139	0.0050	"	0.125	ND	111	70-130	3.94	30	
m,p-Xylene	0.275	0.010	"	0.250	ND	110	70-130	3.60	30	
o-Xylene	0.128	0.0050	"	0.125	ND	103	70-130	1.91	30	
1,2,4-Trimethylbenzene	0.148	0.0050	"	0.125	ND	118	70-130	0.102	30	
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125	ND	120	70-130	3.28	30	
Naphthalene	0.106	0.0038	"	0.125	ND	85.2	70-130	3.52	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0397</i>		<i>"</i>	<i>0.0400</i>		<i>99.2</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Volkens 2

Project Number: [none]
 Project Manager: Paul Henchan

Reported:
 03/15/23 16:21

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 BGC0339 - EPA 3550A

Blank (BGC0339-BLK1)

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	14.8		"	12.5		118		30-150			

LCS (BGC0339-BS1)

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	580	50	mg/kg	500		116		70-130			
Surrogate: <i>o</i> -Terphenyl	14.3		"	12.5		114		30-150			

Matrix Spike (BGC0339-MS1)

Source: 2303235-01

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	509	50	mg/kg	500	13.0	99.2		70-130			
Surrogate: <i>o</i> -Terphenyl	12.4		"	12.5		98.8		30-150			

Matrix Spike Dup (BGC0339-MSD1)

Source: 2303235-01

Prepared & Analyzed: 03/13/23

C10-C28 (DRO)	510	50	mg/kg	500	13.0	99.3		70-130	0.118	20	
Surrogate: <i>o</i> -Terphenyl	12.3		"	12.5		98.3		30-150			

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Project: Noble - Volkens 2

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/15/23 16:21

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 BGC0289 - EPA 5030 Soil MS

Blank (BGC0289-BLK1)

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

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	0.0317		"	0.0333		95.1	40-150			
Surrogate: Fluoranthene-d10	0.0286		"	0.0333		85.9	40-150			

LCS (BGC0289-BS1)

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

Acenaphthene	0.0333	0.00500	mg/kg	0.0333		99.8	31-137			
Anthracene	0.0304	0.00500	"	0.0333		91.2	30-120			
Benzo (a) anthracene	0.0226	0.00500	"	0.0333		67.9	30-120			
Benzo (a) pyrene	0.0349	0.00500	"	0.0333		105	30-120			
Benzo (b) fluoranthene	0.0233	0.00500	"	0.0333		70.0	30-120			
Benzo (k) fluoranthene	0.0336	0.00500	"	0.0333		101	30-120			
Chrysene	0.0289	0.00500	"	0.0333		86.8	30-120			
Dibenz (a,h) anthracene	0.0302	0.00500	"	0.0333		90.5	30-120			
Fluoranthene	0.0346	0.00500	"	0.0333		104	30-120			
Fluorene	0.0304	0.00500	"	0.0333		91.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0339	0.00500	"	0.0333		102	30-120			
Pyrene	0.0342	0.00500	"	0.0333		103	35-142			
1-Methylnaphthalene	0.0304	0.00500	"	0.0333		91.1	35-142			
2-Methylnaphthalene	0.0323	0.00500	"	0.0333		96.8	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0337		"	0.0333		101	40-150			
Surrogate: Fluoranthene-d10	0.0371		"	0.0333		111	40-150			

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Project: Noble - Volkens 2

Project Number: [none]
Project Manager: Paul Henchan

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PAH by EPA Method 8270D SIM - Quality Control

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

Batch BGC0289 - EPA 5030 Soil MS

Matrix Spike (BGC0289-MS1)

Source: 2303233-01

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

Acenaphthene	0.0227	0.00500	mg/kg	0.0333	ND	68.1	31-137			
Anthracene	0.0261	0.00500	"	0.0333	ND	78.2	30-120			
Benzo (a) anthracene	0.0218	0.00500	"	0.0333	ND	65.5	30-120			
Benzo (a) pyrene	0.0279	0.00500	"	0.0333	ND	83.7	30-120			
Benzo (b) fluoranthene	0.0196	0.00500	"	0.0333	ND	58.8	30-120			
Benzo (k) fluoranthene	0.0257	0.00500	"	0.0333	ND	77.2	30-120			
Chrysene	0.0221	0.00500	"	0.0333	ND	66.4	30-120			
Dibenz (a,h) anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120			
Fluoranthene	0.0289	0.00500	"	0.0333	ND	86.7	30-120			
Fluorene	0.0254	0.00500	"	0.0333	ND	76.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0230	0.00500	"	0.0333	ND	68.9	30-120			
Pyrene	0.0265	0.00500	"	0.0333	ND	79.6	35-142			
1-Methylnaphthalene	0.0255	0.00500	"	0.0333	ND	76.6	15-130			
2-Methylnaphthalene	0.0248	0.00500	"	0.0333	ND	74.5	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0278		"	0.0333		83.3	40-150			
Surrogate: Fluoranthene-d10	0.0311		"	0.0333		93.2	40-150			

Matrix Spike Dup (BGC0289-MSD1)

Source: 2303233-01

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

Acenaphthene	0.0203	0.00500	mg/kg	0.0333	ND	61.0	31-137	11.0	30
Anthracene	0.0226	0.00500	"	0.0333	ND	67.8	30-120	14.3	30
Benzo (a) anthracene	0.0204	0.00500	"	0.0333	ND	61.3	30-120	6.57	30
Benzo (a) pyrene	0.0264	0.00500	"	0.0333	ND	79.1	30-120	5.59	30
Benzo (b) fluoranthene	0.0188	0.00500	"	0.0333	ND	56.3	30-120	4.32	30
Benzo (k) fluoranthene	0.0242	0.00500	"	0.0333	ND	72.5	30-120	6.34	30
Chrysene	0.0197	0.00500	"	0.0333	ND	59.1	30-120	11.7	30
Dibenz (a,h) anthracene	0.0184	0.00500	"	0.0333	ND	55.1	30-120	16.5	30
Fluoranthene	0.0227	0.00500	"	0.0333	ND	68.0	30-120	24.2	30
Fluorene	0.0214	0.00500	"	0.0333	ND	64.3	30-120	16.9	30
Indeno (1,2,3-cd) pyrene	0.0187	0.00500	"	0.0333	ND	56.2	30-120	20.2	30
Pyrene	0.0213	0.00500	"	0.0333	ND	64.0	35-142	21.7	30
1-Methylnaphthalene	0.0219	0.00500	"	0.0333	ND	65.7	15-130	15.3	50
2-Methylnaphthalene	0.0213	0.00500	"	0.0333	ND	63.9	15-130	15.3	50
Surrogate: 2-Methylnaphthalene-d10	0.0250		"	0.0333		74.9	40-150		
Surrogate: Fluoranthene-d10	0.0247		"	0.0333		74.2	40-150		

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Project: Noble - Volkens 2

Project Number: [none]
Project Manager: Paul Henchan

Reported:
03/15/23 16:21

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