

FREMONT ENVIRONMENTAL INC.

June 4, 2024

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

Subject: **Flowline Closure Data Submittal**
Benson 13-15
API # 05-123-12942
SWSW Sec. 15, T6N, R65W
Weld County, Colorado
Fremont Project No. C024-020
Remediation # 33111

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted flowline closure activities for the Noble Energy Inc. (Noble) Benson 13-15. Impacted soil was not encountered during abandonment activities. Details of the Benson 13-15 closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

Please contact me at (303) 261-6246 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

FREMONT ENVIRONMENTAL INC.



Stanley Gilbert
Environmental Scientist

Attachments:

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

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: BENSON 13-15		Date: 01/26/2024		Remediation Project #: 33111				
Associated Wells: API:05-123-12942		Age of Site: 1986		Number of Photos Attached: 3				

Starting point: (GPS coordinates and descriptions)
40.479744, -104.657037 (Wellhead)

End point: (GPS coordinates and descriptions)
40.480817, -104.566910 (Separator)

USCS Soil Type: **CL** Estimated Depth to Groundwater: **>4'**

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
None observed

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)
None observed

Flowlines

Flowline type	OIL/Water/Gas							
Depth	2'- 4'							
Age	1986							
Length	392'							
Construction Material	Good							
Were flowlines pulled?	Yes							
Visual Integrity of lines	Good							
Visual impacts if trenched	No							
PID Readings if trenched	See attached							
Sample taken? Location/Sample ID#	Yes, see attached							
Photo Number(s)	See attached							

Other observations regarding on location flowlines:

Summary

Was impacted soil identified?
 No Yes - less than 10 cubic yards Yes - more than 10 cubic yards

Total number of samples field screened: **1** Total number of samples collected: **3**

Highest PID Reading: **2.1ppm (FL03 3')** Total number of samples submitted to lab for analysis: **2**

If more than 10 cubic yards of impacted soil were observed:

Vertical extent: Estimated spill volume:

Lateral extent: Volume of soil removed:

Is additional investigation required?
No

Was groundwater encountered during the investigation?
 No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils

Measured depth to groundwater: Was remedial groundwater removal conducted? Yes No

Date Groundwater was encountered: Commencement date of removal:

Sheen on groundwater? Yes No Volume of groundwater removed prior to sampling:

Free product observed? Yes No Volume of groundwater removed post sampling:

Total number of samples collected: Total Volume of groundwater removed:

Total number of samples submitted to lab for analysis:

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BENSON 13-15, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-020

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**		
FLO1 4'	01/26/2024	4'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
FLO3 3'	01/26/2024	3'	<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)

Green highlighted cells indicate soil removed via excavation

* 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.
BENSON 13-15, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-020

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
FL01 4'	01/26/2024	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
FL03 3'	01/26/2024	3'	<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

Green highlighted cells indicate soil removed via excavation

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
BENSON 13-15, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-020

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
ECMC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
Max. Background Concentration (or Concentration Range)			8.77	-	-	-
FL01 4'	01/26/2024	4'	8.32	0.118	0.0359	<2.00
FL03 3'	01/26/2024	3'	8.49	0.214	0.691	<2.00
BKG 3'	01/26/2024	3'	8.67	0.157	0.388	<2.00
BKG 4'	01/26/2024	4'	8.77	0.112	0.0454	<2.00

Bold faced, yellow highlighted values exceed the ECMC Table 915-1 concentrations

Green highlighted cells indicate soil removed via excavation

Orange highlighted cells exceed of the maximum background concentration, or concentration range

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

NA - Not analyzed

TABLE 4
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
BENSON 13-15, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-020

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
125% Max. Background Concentration			3.44	95.0	0.429	-	8.38	15.0	5.88	-	0.0408	27.1
FL01 4'	01/26/2024	4'	2.04	81.6	<0.200	<0.30	3.49	4.67	3.81	<0.260	0.0274	11.9
FL03 3'	01/26/2024	3'	2.31	86.3	0.389	<0.30	6.96	15.7	4.86	<0.260	0.0342	21.3
BKG 3'	01/26/2024	3'	2.75	76.0	0.343	<0.30	6.70	12.0	4.70	<0.260	0.0326	21.7
BKG 4'	01/26/2024	4'	1.93	56.8	<0.200	<0.30	3.27	3.52	3.18	<0.260	<0.0200	11.6

Bold faced values exceed the ECMC Table 915-1 concentrations

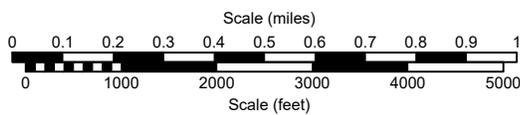
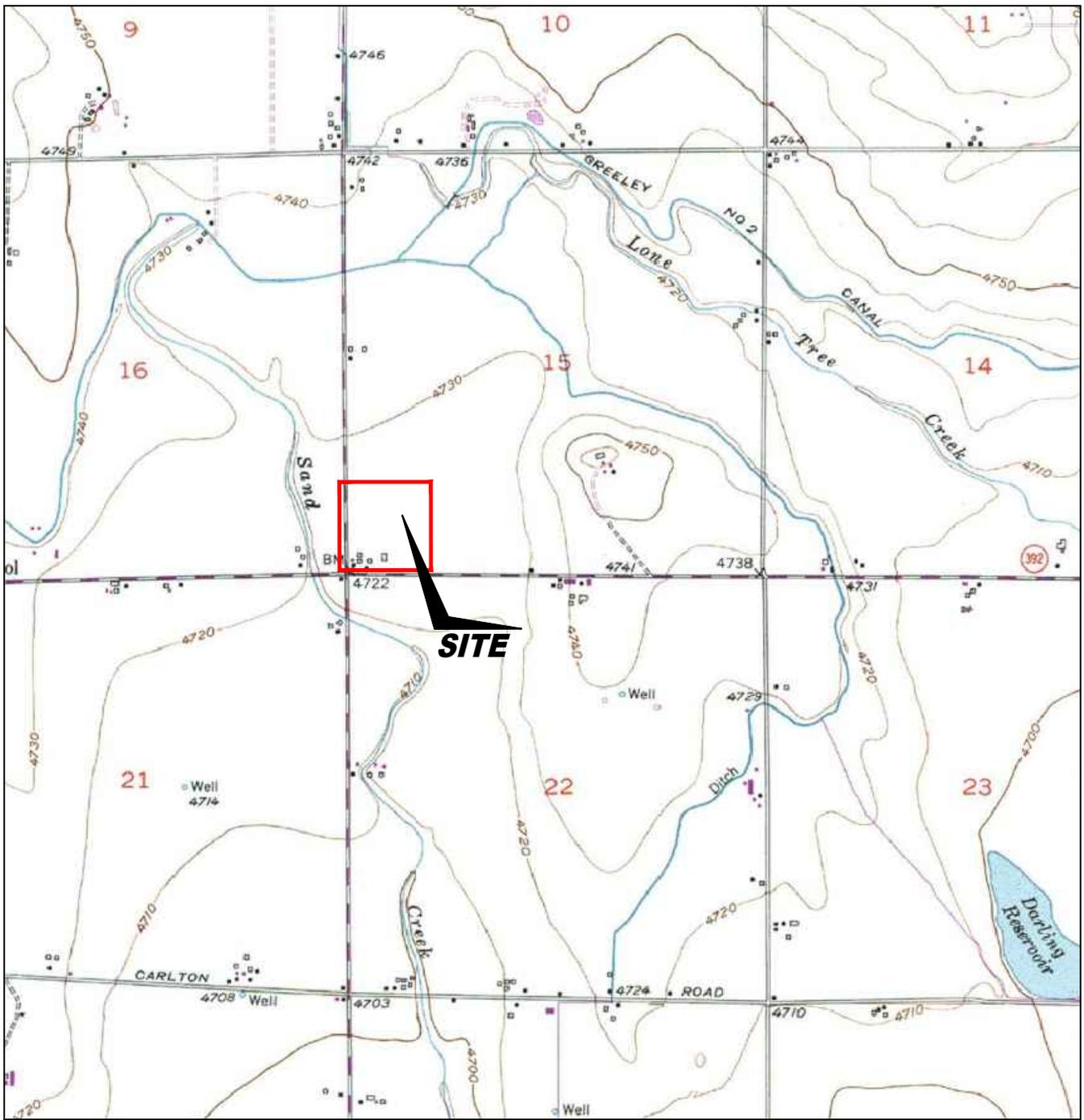
Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)

Orange highlighted cells exceed 125% of the maximum background concentration

* Indicates laboratory minimum detection limit in excess of SSL

Green highlighted cells indicate soil removed via excavation

NA - Not analyzed



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP
NOBLE ENERGY INC ~ BENSON 13-15

SWSW Sec. 15, T6N, R65W, 6th PM
 Weld County, Colorado
 40.480819°, -104.656909°

Project # CO24-020	API # 05-123-12942	Facility #
Date 7/1/24	Remediation # 33111	Filename 24020T





LEGEND

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

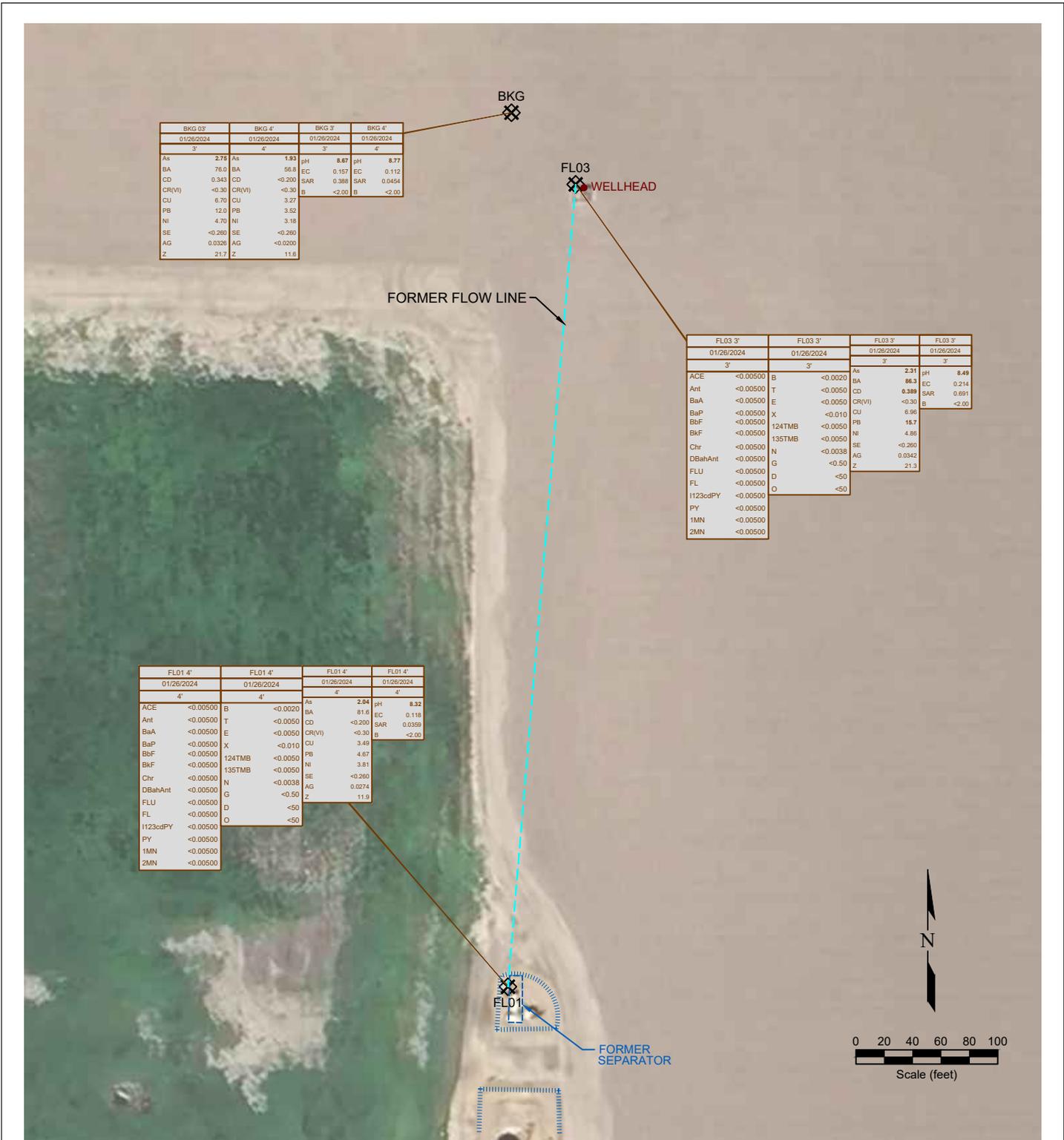
Figure 2
SITE MAP

NOBLE ENERGY INC ~ BENSON 13-15

SWSW Sec. 15, T6N, R65W, 6th PM
Weld County, Colorado
40.480819°, -104.656909°

Project No. CO24-020	API # 05-123-12942	Facility #
Date 7/1/24	Remediation # 33111	Filename 24020Q





LEGEND

- WELL HEAD LOCATION
- ⊗ SOIL SAMPLE LOCATION
- ABOVE GROUND STORAGE TANK
- ▭ FORMER FACILITY
- FORMER FLOW LINE
- FENCE LINE
- ||||| CONTAINMENT BERM
- CONTAINMENT WALL
- NOT ANALYZED

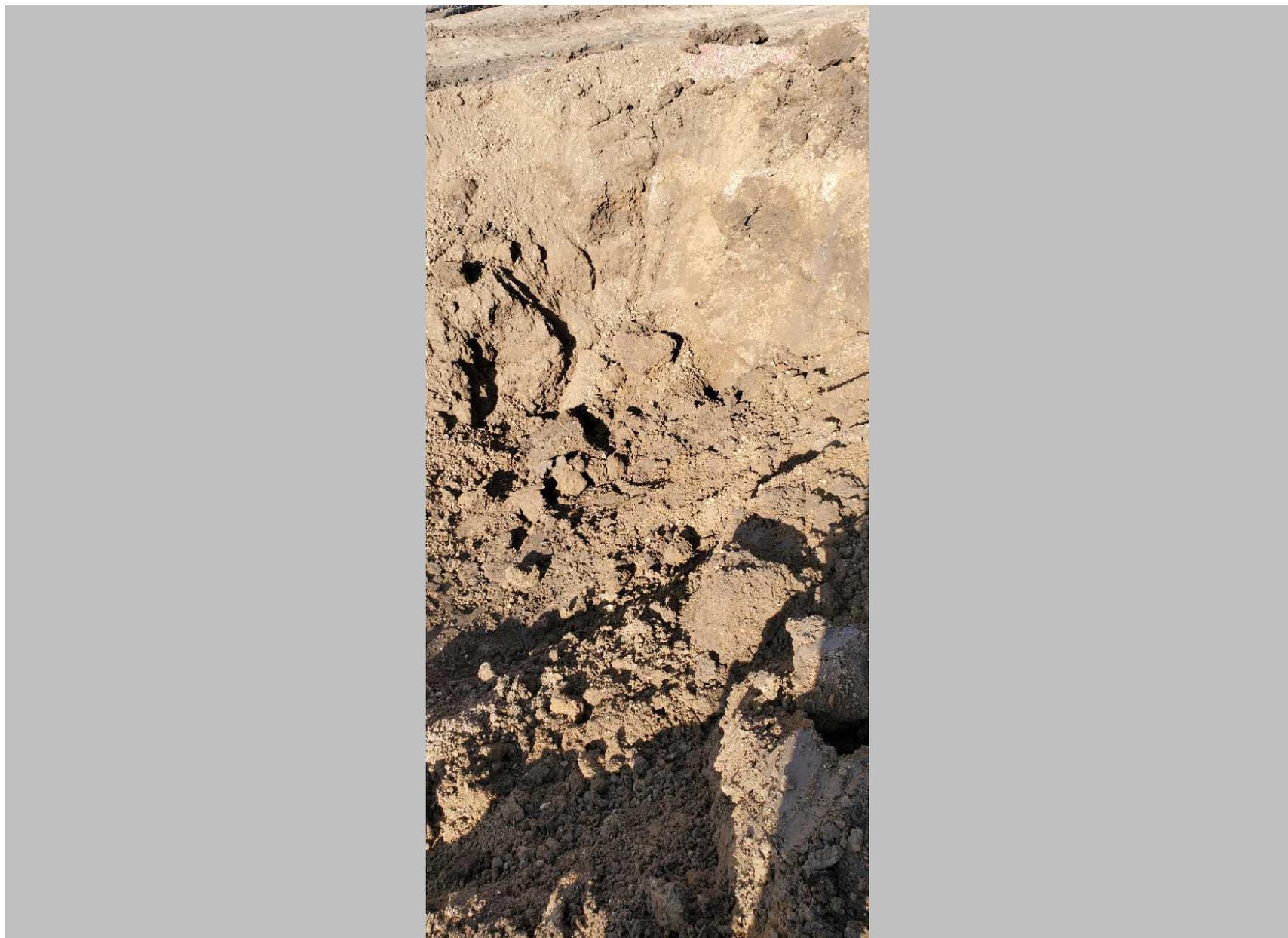
SAMPLE ID	SAMPLE ID	SAMPLE ID	SAMPLE ID
DATE	DATE	DATE	DATE
DEPTH	DEPTH	DEPTH	DEPTH
ACE	ACENAPHTHENE (mg/kg)	As	ARSENIC (mg/kg)
Ant	ANTHRACENE (mg/kg)	Ba	BARIUM (mg/kg)
BaA	BENZO (A) ANTHRACENE (mg/kg)	CD	CADMIUM (mg/kg)
BaP	BENZO (B) FLUORANTHENE (mg/kg)	CR(VI)	CHROMIUM (mg/kg)
BbF	BENZO (K) FLUORANTHENE (mg/kg)	CU	COPPER (mg/kg)
Chr	CHRYSENE (mg/kg)	EC	EC (pH units)
DBahAnt	DIBENZ (A,H) ANTHRACENE (mg/kg)	EC	EC (mmol/cm)
FLU	FLUORANTHENE (mg/kg)	EC	EC (mg/kg)
FL	FLUORENE (mg/kg)	EC	EC (mg/kg)
1123cdPY	1,2,3,4-DIBENZO (P) PYRENE (mg/kg)	EC	EC (mg/kg)
PY	PYRENE (mg/kg)	EC	EC (mg/kg)
1MN	1-METHYLNAPHTHALENE (mg/kg)	EC	EC (mg/kg)
2MN	2-METHYLNAPHTHALENE (mg/kg)	EC	EC (mg/kg)

Figure 3
SOIL CHEMISTRY MAP
NOBLE ENERGY INC ~ BENSON 13-15

SWSW Sec. 15, T6N, R65W, 6th PM
 Weld County, Colorado
 40.480819°, -104.656909°

Project No. CO24-020	API # 05-123-12942	Facility #
Date 7/1/24	Remediation # 33111	Filename 24020Q

Photo Log



Description:

#1- FL01 - No staining or odor



Description:

#2- FL02. - No staining or odor

Photo Log



Description:

#3- FL03 - No staining or odor

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

March 05, 2024

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Benson 13-15

Work Order #2401486

Enclosed are the results of analyses for samples received by Summit Scientific on 01/26/24 16:30. 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 small flourish at the end of the word "Wood".

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL01 4'	2401486-01	Soil	01/26/24 11:35	01/26/24 16:30
FL03 3'	2401486-02	Soil	01/26/24 11:30	01/26/24 16:30
BKG 3'	2401486-03	Soil	01/26/24 11:25	01/26/24 16:30
BKG 4'	2401486-04	Soil	01/26/24 11:20	01/26/24 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.



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

Lab ID	Page 1 of 1
240148b	

Client: Fremont Environmental		Send Data To: Project Manager: Paul Henehan		Send Invoice To: Company: <i>Noble</i>	
Address:		E-Mail: Fremont Distribution List		Project Name/Location:	
City/State/Zip:		Project Name: <i>BENSON 13-15</i>		AFE#:	
Phone: 303-261-6246		Project Number:		PO/Billing Codes: <i>UWRWE-A2591-ABN</i>	
Sampler Name: Stanley Gilbert				Contact: <i>Mike Montoya</i>	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested					Special Instructions		
					HCl	HNO3	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron		Metals (915)	TDS, Chloride, Sulfate
1	FLO 1 4'	1/26/24	11:35	2			X			X				X	X	X			
2	FLO 3 3'		11:30	2			I						X	X	X	X			
3	BKG 3'		11:25	2			I							X	X				
4	BKG 4'		11:20	2			I							X	X				
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by: <i>[Signature]</i>	Date/Time: 1/26/24 15:00	Received by: Summit North	Date/Time: 1/26/24 15:00	TAT Business Days	Field DO	Notes:
Relinquished by: <i>SZ</i>	Date/Time: 1/26/24 11:30	Received by: <i>[Signature]</i>	Date/Time: 1/26/24 11:30	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 7.1	Corrected Temperature: <i>⊖</i>	IR gun #: 1	HNO3 lot #:	Standard	<input checked="" type="checkbox"/> Field Turb.	

S₂

Sample Receipt Checklist

S2 Work Order# 2401486

Client: Fremont Client Project ID: Benson 13-15

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

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 checked="" type="checkbox"/>	<input 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 type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	no times
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				

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

AS
Custodian Printed Name

1/26/24
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

FL01 4'
2401486-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHA1001	01/29/24	01/31/24	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: **01/26/24 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0427	107 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0378	94.4 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.4 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHA1003	01/29/24	01/31/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	9.37	75.0 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

FL01 4'
2401486-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0988	01/29/24	01/29/24	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: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0202	60.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0232	69.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0060	02/02/24	02/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/26/24 11:35**

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 - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

FL01 4'
2401486-01 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.04	0.200	mg/kg dry	1	BHA1111	01/31/24	02/03/24	EPA 6020B	
Barium	81.6	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.49	0.400	"	"	"	"	"	"	
Lead	4.67	0.200	"	"	"	"	"	"	
Nickel	3.81	0.400	"	"	"	"	"	"	
Silver	0.0274	0.0200	"	"	"	"	"	"	
Zinc	11.9	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA1017	01/29/24	01/31/24	EPA 7196A	

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

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	181	0.0500	mg/L dry	1	BHA0987	01/29/24	02/06/24	EPA 6020B	
Magnesium	20.1	0.0500	"	"	"	"	"	"	
Sodium	1.91	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0359	0.00100	units	1	BHB0225	02/07/24	02/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

FL01 4'
2401486-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	87.7		%	1	BHA1081	01/31/24	01/31/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.118	0.0100	mmhos/cm	1	BHA1038	01/30/24	01/30/24	EPA 120.1	

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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

FL01 4'
2401486-01 (Soil)

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

Date Sampled: **01/26/24 11:35**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.32		pH Units	1	BHB0799	02/26/24	02/26/24	EPA 9045D	I-04

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Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

FL03 3'
2401486-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHA1001	01/29/24	01/31/24	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: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0456	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0391	97.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0395	98.8 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHA1003	01/29/24	01/31/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.76	70.1 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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 PO Box 1289
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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

FL03 3'
2401486-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHA0988	01/29/24	01/29/24	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: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0178	53.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0205	61.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0060	02/02/24	02/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/26/24 11:30**

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 - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

FL03 3'
2401486-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.31	0.200	mg/kg dry	1	BHA1111	01/31/24	02/03/24	EPA 6020B	
Barium	86.3	0.400	"	"	"	"	"	"	
Copper	6.96	0.400	"	"	"	"	"	"	
Nickel	4.86	0.400	"	"	"	"	"	"	
Silver	0.0342	0.0200	"	"	"	"	"	"	
Zinc	21.3	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHA1017	01/29/24	01/31/24	EPA 7196A	

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

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	57.5	0.0500	mg/L dry	1	BHA0987	01/29/24	02/06/24	EPA 6020B	
Magnesium	13.4	0.0500	"	"	"	"	"	"	
Sodium	22.4	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.691	0.00100	units	1	BHB0225	02/07/24	02/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.8		%	1	BHA1081	01/31/24	01/31/24	Calculation	

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Fremont Environmental
 PO Box 1289
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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
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FL03 3'
2401486-02 (Soil)

Summit Scientific

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.214	0.0100		mmhos/cm	1	BHA1038	01/30/24	01/30/24	EPA 120.1	

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

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	8.49			pH Units	1	BHA1037	01/30/24	01/30/24	EPA 9045D	

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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

FL03 3'
2401486-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Date Sampled: **01/26/24 11:30**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Cadmium	0.389	0.200	mg/kg dry	1	BHB0663	02/21/24	02/22/24	EPA 6020B	
Lead	15.7	0.200	"	"	"	"	"	"	

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Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

BKG 3'
2401486-03 (Soil)

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Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0060	02/02/24	02/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	2.75	0.200		mg/kg dry	1	BHA1111	01/31/24	02/03/24	EPA 6020B	
Barium	76.0	0.400		"	"	"	"	"	"	
Cadmium	0.343	0.200		"	"	"	"	"	"	
Copper	6.70	0.400		"	"	"	"	"	"	
Lead	12.0	0.200		"	"	"	"	"	"	
Nickel	4.70	0.400		"	"	"	"	"	"	
Silver	0.0326	0.0200		"	"	"	"	"	"	
Zinc	21.7	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHA1017	01/29/24	01/31/24	EPA 7196A	

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

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	63.1	0.0500		mg/L dry	1	BHA0987	01/29/24	02/06/24	EPA 6020B	
Magnesium	20.7	0.0500		"	"	"	"	"	"	
Sodium	13.9	0.0500		"	"	"	"	"	"	

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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

BKG 3'
2401486-03 (Soil)

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Calculated Analysis

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.388	0.00100	units	1	BHB0225	02/07/24	02/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.0		%	1	BHA1081	01/31/24	01/31/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.157	0.0100	mmhos/cm	1	BHA1038	01/30/24	01/30/24	EPA 120.1	

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

Date Sampled: **01/26/24 11:25**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.67		pH Units	1	BHA1037	01/30/24	01/30/24	EPA 9045D	

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Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

BKG 4'
2401486-04 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Boron	ND	2.00		mg/L	1	BHB0060	02/02/24	02/07/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Arsenic	1.93	0.200		mg/kg dry	1	BHA1111	01/31/24	02/03/24	EPA 6020B	
Barium	56.8	0.400		"	"	"	"	"	"	
Cadmium	ND	0.200		"	"	"	"	"	"	
Copper	3.27	0.400		"	"	"	"	"	"	
Lead	3.52	0.200		"	"	"	"	"	"	
Nickel	3.18	0.400		"	"	"	"	"	"	
Silver	ND	0.0200		"	"	"	"	"	"	
Zinc	11.6	0.400		"	"	"	"	"	"	
Selenium	ND	0.260		"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BHA1017	01/29/24	01/31/24	EPA 7196A	

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

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Calcium	181	0.0500		mg/L dry	1	BHA0987	01/29/24	02/06/24	EPA 6020B	
Magnesium	17.8	0.0500		"	"	"	"	"	"	
Sodium	2.39	0.0500		"	"	"	"	"	"	

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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

BKG 4'
2401486-04 (Soil)

Summit Scientific

Calculated Analysis

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0454	0.00100	units	1	BHB0225	02/07/24	02/07/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.3		%	1	BHA1081	01/31/24	01/31/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.112	0.0100	mmhos/cm	1	BHA1038	01/30/24	01/30/24	EPA 120.1	

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

Date Sampled: **01/26/24 11:20**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.77		pH Units	1	BHA1037	01/30/24	01/30/24	EPA 9045D	

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Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BHA1001 - EPA 5030 Soil MS

Blank (BHA1001-BLK1)

Prepared & Analyzed: 01/29/24

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	0.0413		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0401		"	0.0400		100	50-150			
Surrogate: 4-Bromofluorobenzene	0.0401		"	0.0400		100	50-150			

LCS (BHA1001-BS1)

Prepared: 01/29/24 Analyzed: 01/30/24

Benzene	0.0788	0.0020	mg/kg	0.100		78.8	70-130			
Toluene	0.0960	0.0050	"	0.100		96.0	70-130			
Ethylbenzene	0.0951	0.0050	"	0.100		95.1	70-130			
m,p-Xylene	0.197	0.010	"	0.200		98.3	70-130			
o-Xylene	0.0969	0.0050	"	0.100		96.9	70-130			
1,2,4-Trimethylbenzene	0.0932	0.0050	"	0.100		93.2	70-130			
1,3,5-Trimethylbenzene	0.0934	0.0050	"	0.100		93.4	70-130			
Naphthalene	0.0854	0.0038	"	0.100		85.4	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0399		"	0.0400		99.8	50-150			
Surrogate: Toluene-d8	0.0398		"	0.0400		99.5	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	50-150			

Matrix Spike (BHA1001-MS1)

Source: 2401156-01

Prepared: 01/29/24 Analyzed: 01/30/24

Benzene	0.0744	0.0020	mg/kg	0.100	ND	74.4	70-130			
Toluene	0.0854	0.0050	"	0.100	ND	85.4	70-130			
Ethylbenzene	0.0844	0.0050	"	0.100	ND	84.4	70-130			
m,p-Xylene	0.170	0.010	"	0.200	ND	85.2	70-130			
o-Xylene	0.0850	0.0050	"	0.100	ND	85.0	70-130			
1,2,4-Trimethylbenzene	0.0717	0.0050	"	0.100	ND	71.7	70-130			
1,3,5-Trimethylbenzene	0.0761	0.0050	"	0.100	ND	76.1	70-130			
Naphthalene	0.0592	0.0038	"	0.100	0.00453	54.6	70-130			QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0400		96.8	50-150			
Surrogate: Toluene-d8	0.0370		"	0.0400		92.6	50-150			
Surrogate: 4-Bromofluorobenzene	0.0387		"	0.0400		96.8	50-150			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

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 BHA1001 - EPA 5030 Soil MS

Matrix Spike Dup (BHA1001-MSD1)	Source: 2401156-01			Prepared: 01/29/24 Analyzed: 01/30/24						
Benzene	0.0672	0.0020	mg/kg	0.100	ND	67.2	70-130	10.2	30	QM-07
Toluene	0.0843	0.0050	"	0.100	ND	84.3	70-130	1.31	30	
Ethylbenzene	0.0810	0.0050	"	0.100	ND	81.0	70-130	4.17	30	
m,p-Xylene	0.162	0.010	"	0.200	ND	80.9	70-130	5.26	30	
o-Xylene	0.0835	0.0050	"	0.100	ND	83.5	70-130	1.74	30	
1,2,4-Trimethylbenzene	0.0694	0.0050	"	0.100	ND	69.4	70-130	3.32	30	QM-07
1,3,5-Trimethylbenzene	0.0766	0.0050	"	0.100	ND	76.6	70-130	0.746	30	
Naphthalene	0.0618	0.0038	"	0.100	0.00453	57.3	70-130	4.37	30	QM-07
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0403</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			

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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

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 BHA1003 - EPA 3550A

Blank (BHA1003-BLK1)

Prepared & Analyzed: 01/29/24

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

LCS (BHA1003-BS1)

Prepared & Analyzed: 01/29/24

C10-C28 (DRO)	393	50	mg/kg	500		78.6		70-130			
Surrogate: <i>o</i> -Terphenyl	13.2		"	12.5		106		30-150			

Matrix Spike (BHA1003-MS1)

Source: 2401156-01

Prepared & Analyzed: 01/29/24

C10-C28 (DRO)	390	50	mg/kg	500	5.35	77.0		70-130			
Surrogate: <i>o</i> -Terphenyl	10.1		"	12.5		81.0		30-150			

Matrix Spike Dup (BHA1003-MSD1)

Source: 2401156-01

Prepared & Analyzed: 01/29/24

C10-C28 (DRO)	421	50	mg/kg	500	5.35	83.2		70-130	7.67	20	
Surrogate: <i>o</i> -Terphenyl	9.77		"	12.5		78.2		30-150			

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Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

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 BHA0988 - EPA 5030 Soil MS

Blank (BHA0988-BLK1)

Prepared & Analyzed: 01/29/24

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>	<i>0.0307</i>		<i>"</i>	<i>0.0333</i>		<i>92.0</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0313</i>		<i>"</i>	<i>0.0333</i>		<i>93.8</i>		<i>40-150</i>		

LCS (BHA0988-BS1)

Prepared & Analyzed: 01/29/24

Acenaphthene	0.0332	0.00500	mg/kg	0.0333		99.5		31-137		
Anthracene	0.0340	0.00500	"	0.0333		102		30-120		
Benzo (a) anthracene	0.0153	0.00500	"	0.0333		45.9		30-120		
Benzo (a) pyrene	0.0272	0.00500	"	0.0333		81.6		30-120		
Benzo (b) fluoranthene	0.0240	0.00500	"	0.0333		72.1		30-120		
Benzo (k) fluoranthene	0.0307	0.00500	"	0.0333		92.2		30-120		
Chrysene	0.0342	0.00500	"	0.0333		103		30-120		
Dibenz (a,h) anthracene	0.0265	0.00500	"	0.0333		79.6		30-120		
Fluoranthene	0.0330	0.00500	"	0.0333		99.0		30-120		
Fluorene	0.0330	0.00500	"	0.0333		98.9		30-120		
Indeno (1,2,3-cd) pyrene	0.0381	0.00500	"	0.0333		114		30-120		
Pyrene	0.0364	0.00500	"	0.0333		109		35-142		
1-Methylnaphthalene	0.0392	0.00500	"	0.0333		118		35-142		
2-Methylnaphthalene	0.0279	0.00500	"	0.0333		83.7		35-142		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0407</i>		<i>"</i>	<i>0.0333</i>		<i>122</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0346</i>		<i>"</i>	<i>0.0333</i>		<i>104</i>		<i>40-150</i>		

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PO Box 1289
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Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

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 BHA0988 - EPA 5030 Soil MS

Matrix Spike (BHA0988-MS1)

Source: 2401486-01

Prepared & Analyzed: 01/29/24

Acenaphthene	0.0242	0.00500	mg/kg	0.0333	ND	72.6	31-137			
Anthracene	0.0249	0.00500	"	0.0333	ND	74.8	30-120			
Benzo (a) anthracene	0.0150	0.00500	"	0.0333	ND	45.0	30-120			
Benzo (a) pyrene	0.0219	0.00500	"	0.0333	ND	65.7	30-120			
Benzo (b) fluoranthene	0.0183	0.00500	"	0.0333	ND	54.8	30-120			
Benzo (k) fluoranthene	0.0228	0.00500	"	0.0333	ND	68.3	30-120			
Chrysene	0.0252	0.00500	"	0.0333	ND	75.7	30-120			
Dibenz (a,h) anthracene	0.0218	0.00500	"	0.0333	ND	65.5	30-120			
Fluoranthene	0.0255	0.00500	"	0.0333	ND	76.4	30-120			
Fluorene	0.0247	0.00500	"	0.0333	ND	74.1	30-120			
Indeno (1,2,3-cd) pyrene	0.0307	0.00500	"	0.0333	ND	92.0	30-120			
Pyrene	0.0268	0.00500	"	0.0333	ND	80.4	35-142			
1-Methylnaphthalene	0.0285	0.00500	"	0.0333	ND	85.4	15-130			
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.4	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0281		"	0.0333		84.3	40-150			
Surrogate: Fluoranthene-d10	0.0267		"	0.0333		80.1	40-150			

Matrix Spike Dup (BHA0988-MSD1)

Source: 2401486-01

Prepared & Analyzed: 01/29/24

Acenaphthene	0.0210	0.00500	mg/kg	0.0333	ND	63.1	31-137	14.0	30
Anthracene	0.0217	0.00500	"	0.0333	ND	65.1	30-120	13.9	30
Benzo (a) anthracene	0.0138	0.00500	"	0.0333	ND	41.4	30-120	8.37	30
Benzo (a) pyrene	0.0205	0.00500	"	0.0333	ND	61.4	30-120	6.75	30
Benzo (b) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.2	30-120	8.87	30
Benzo (k) fluoranthene	0.0202	0.00500	"	0.0333	ND	60.7	30-120	11.8	30
Chrysene	0.0220	0.00500	"	0.0333	ND	65.9	30-120	13.9	30
Dibenz (a,h) anthracene	0.0201	0.00500	"	0.0333	ND	60.3	30-120	8.25	30
Fluoranthene	0.0225	0.00500	"	0.0333	ND	67.5	30-120	12.4	30
Fluorene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	13.1	30
Indeno (1,2,3-cd) pyrene	0.0272	0.00500	"	0.0333	ND	81.5	30-120	12.1	30
Pyrene	0.0237	0.00500	"	0.0333	ND	71.1	35-142	12.3	30
1-Methylnaphthalene	0.0251	0.00500	"	0.0333	ND	75.4	15-130	12.4	50
2-Methylnaphthalene	0.0222	0.00500	"	0.0333	ND	66.7	15-130	3.48	50
Surrogate: 2-Methylnaphthalene-d10	0.0228		"	0.0333		68.4	40-150		
Surrogate: Fluoranthene-d10	0.0234		"	0.0333		70.2	40-150		

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

Total Metals by EPA 6020B Hot Water Soluble Extraction - Quality Control
Summit Scientific

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

Batch BHB0060 - EPA 3050B

Blank (BHB0060-BLK1)											
						Prepared: 02/02/24 Analyzed: 02/07/24					
Boron	ND	2.00	mg/L								
LCS (BHB0060-BS1)											
						Prepared: 02/02/24 Analyzed: 02/07/24					
Boron	4.83	2.00	mg/L	5.00	96.7	80-120					
Duplicate (BHB0060-DUP1)											
						Source: 2401486-01 Prepared: 02/02/24 Analyzed: 02/07/24					
Boron	0.119	2.00	mg/L		0.116				2.39	20	
Matrix Spike (BHB0060-MS1)											
						Source: 2401486-01 Prepared: 02/02/24 Analyzed: 02/07/24					
Boron	5.29	2.00	mg/L	5.00	0.116	104	75-125				
Matrix Spike Dup (BHB0060-MSD1)											
						Source: 2401486-01 Prepared: 02/02/24 Analyzed: 02/07/24					
Boron	5.36	2.00	mg/L	5.00	0.116	105	75-125	1.30		25	

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHA1111 - EPA 3050B

Blank (BHA1111-BLK1)

Prepared: 01/31/24 Analyzed: 02/03/24

Arsenic	ND	0.200	mg/kg wet							
Barium	ND	0.400	"							
Cadmium	ND	0.200	"							
Copper	ND	0.400	"							
Lead	ND	0.200	"							
Nickel	ND	0.400	"							
Silver	ND	0.0200	"							
Zinc	ND	0.400	"							
Selenium	ND	0.260	"							

LCS (BHA1111-BS1)

Prepared: 01/31/24 Analyzed: 02/03/24

Arsenic	35.5	0.200	mg/kg wet	40.0	88.7	80-120				
Barium	39.3	0.400	"	40.0	98.3	80-120				
Cadmium	2.05	0.200	"	2.00	102	80-120				
Copper	47.7	0.400	"	40.0	119	80-120				
Lead	20.2	0.200	"	20.0	101	80-120				
Nickel	45.9	0.400	"	40.0	115	80-120				
Silver	2.08	0.0200	"	2.00	104	80-120				
Zinc	48.1	0.400	"	40.0	120	80-120				
Selenium	3.61	0.260	"	4.00	90.2	80-120				

Duplicate (BHA1111-DUP1)

Source: 2401465-01

Prepared: 01/31/24 Analyzed: 02/03/24

Arsenic	3.70	0.200	mg/kg dry	4.07	9.65	20				
Barium	80.4	0.400	"	124	42.5	20				QM-07
Cadmium	0.145	0.200	"	0.189	26.8	20				QM-07
Copper	7.05	0.400	"	7.60	7.42	20				
Lead	8.21	0.200	"	8.54	3.94	20				
Nickel	6.51	0.400	"	7.27	11.1	20				
Silver	0.0226	0.0200	"	0.0199	12.8	20				
Zinc	22.2	0.400	"	23.3	4.97	20				
Selenium	ND	0.260	"	ND		20				

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Project: Noble - Benson 13-15
Project Number: UWRWE-A2591-ABN
Project Manager: Paul Henchan

Reported:
03/05/24 10:22

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHA1111 - EPA 3050B

Matrix Spike (BHA1111-MS1)		Source: 2401465-01			Prepared: 01/31/24		Analyzed: 02/03/24	
Arsenic	42.6	0.200	mg/kg dry	45.2	4.07	85.2	75-125	
Barium	120	0.400	"	45.2	124	NR	75-125	QM-07
Cadmium	2.53	0.200	"	2.26	0.189	104	75-125	
Copper	35.6	0.400	"	45.2	7.60	62.1	75-125	QM-07
Lead	32.8	0.200	"	22.6	8.54	107	75-125	
Nickel	35.0	0.400	"	45.2	7.27	61.3	75-125	QM-07
Silver	2.26	0.0200	"	2.26	0.0199	99.2	75-125	
Zinc	52.9	0.400	"	45.2	23.3	65.4	75-125	QM-07
Selenium	3.24	0.260	"	4.52	ND	71.7	75-125	QM-07

Matrix Spike Dup (BHA1111-MSD1)		Source: 2401465-01			Prepared: 01/31/24		Analyzed: 02/03/24			
Arsenic	42.4	0.200	mg/kg dry	45.2	4.07	84.8	75-125	0.482	25	
Barium	118	0.400	"	45.2	124	NR	75-125	2.08	25	QM-07
Cadmium	2.52	0.200	"	2.26	0.189	103	75-125	0.680	25	
Copper	36.4	0.400	"	45.2	7.60	63.7	75-125	1.99	25	QM-07
Lead	33.0	0.200	"	22.6	8.54	108	75-125	0.571	25	
Nickel	35.8	0.400	"	45.2	7.27	63.2	75-125	2.33	25	QM-07
Silver	2.26	0.0200	"	2.26	0.0199	99.0	75-125	0.220	25	
Zinc	54.1	0.400	"	45.2	23.3	68.1	75-125	2.30	25	QM-07
Selenium	3.18	0.260	"	4.52	ND	70.4	75-125	1.79	25	QM-07

Batch BHB0663 - EPA 3050B

Blank (BHB0663-BLK1)					Prepared: 02/21/24		Analyzed: 02/22/24	
Arsenic	ND	0.200	mg/kg wet					
Barium	ND	0.400	"					
Cadmium	ND	0.200	"					
Copper	ND	0.400	"					
Lead	ND	0.200	"					
Nickel	ND	0.400	"					
Silver	ND	0.0200	"					
Zinc	ND	0.400	"					
Selenium	ND	0.260	"					

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 Wellington CO, 80549

Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHB0663 - EPA 3050B

LCS (BHB0663-BS1)

Prepared: 02/21/24 Analyzed: 02/22/24

Arsenic	36.0	0.200	mg/kg wet	40.0		90.0	80-120			
Barium	39.8	0.400	"	40.0		99.5	80-120			
Cadmium	2.10	0.200	"	2.00		105	80-120			
Copper	45.3	0.400	"	40.0		113	80-120			
Lead	20.8	0.200	"	20.0		104	80-120			
Nickel	43.7	0.400	"	40.0		109	80-120			
Silver	2.07	0.0200	"	2.00		103	80-120			
Zinc	44.7	0.400	"	40.0		112	80-120			
Selenium	4.08	0.260	"	4.00		102	80-120			

Duplicate (BHB0663-DUP1)

Source: 2401486-02RE1

Prepared: 02/21/24 Analyzed: 02/22/24

Arsenic	3.57	0.200	mg/kg dry		3.56			0.219	20	
Barium	113	0.400	"		110			2.56	20	
Cadmium	0.410	0.200	"		0.389			5.26	20	
Copper	6.80	0.400	"		7.57			10.8	20	
Lead	20.3	0.200	"		15.7			25.9	20	QR-04
Nickel	4.86	0.400	"		5.36			9.97	20	
Silver	0.0323	0.0200	"		0.0420			26.3	20	QR-01
Zinc	20.5	0.400	"		22.6			9.43	20	
Selenium	ND	0.260	"		ND				20	

Matrix Spike (BHB0663-MS1)

Source: 2401486-02RE1

Prepared: 02/21/24 Analyzed: 02/22/24

Arsenic	47.9	0.200	mg/kg dry	48.9	3.56	90.8	75-125			
Barium	160	0.400	"	48.9	110	104	75-125			
Cadmium	2.94	0.200	"	2.44	0.389	105	75-125			
Copper	45.8	0.400	"	48.9	7.57	78.3	75-125			
Lead	59.3	0.200	"	24.4	15.7	178	75-125			QM-07
Nickel	41.7	0.400	"	48.9	5.36	74.4	75-125			QM-07
Silver	2.58	0.0200	"	2.44	0.0420	104	75-125			
Zinc	57.1	0.400	"	48.9	22.6	70.7	75-125			QM-07
Selenium	4.62	0.260	"	4.89	ND	94.5	75-125			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHB0663 - EPA 3050B

Matrix Spike Dup (BHB0663-MSD1)	Source: 2401486-02RE1			Prepared: 02/21/24		Analyzed: 02/22/24				
Arsenic	46.5	0.200	mg/kg dry	48.9	3.56	87.9	75-125	2.94	25	
Barium	155	0.400	"	48.9	110	92.9	75-125	3.33	25	
Cadmium	2.88	0.200	"	2.44	0.389	102	75-125	2.35	25	
Copper	45.0	0.400	"	48.9	7.57	76.6	75-125	1.87	25	
Lead	57.4	0.200	"	24.4	15.7	171	75-125	3.14	25	QM-07
Nickel	41.0	0.400	"	48.9	5.36	72.8	75-125	1.87	25	QM-07
Silver	2.52	0.0200	"	2.44	0.0420	101	75-125	2.55	25	
Zinc	56.5	0.400	"	48.9	22.6	69.4	75-125	1.07	25	QM-07
Selenium	4.38	0.260	"	4.89	ND	89.6	75-125	5.41	25	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

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

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

Batch BHA0987 - General Preparation

Blank (BHA0987-BLK1)

Prepared: 01/29/24 Analyzed: 02/06/24

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

LCS (BHA0987-BS1)

Prepared: 01/29/24 Analyzed: 02/06/24

Calcium	6.47	0.0500	mg/L wet	5.00		129	70-130			
Magnesium	6.20	0.0500	"	5.00		124	70-130			
Sodium	6.38	0.0500	"	5.00		128	70-130			

Summit Scientific

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Project: Noble - Benson 13-15

Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

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 BHA1081 - General Preparation

Duplicate (BHA1081-DUP1)

Source: 2401156-04

Prepared & Analyzed: 01/31/24

% Solids	93.7		%		93.4			0.367		20	
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Summit Scientific



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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

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 BHA1038 - General Preparation

Blank (BHA1038-BLK1)

Prepared & Analyzed: 01/30/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHA1038-BS1)

Prepared & Analyzed: 01/30/24

Specific Conductance (EC) 0.155 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BHA1038-DUP1)

Source: 2401486-01

Prepared & Analyzed: 01/30/24

Specific Conductance (EC) 0.118 0.0100 mmhos/cm 0.118 0.763 20

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Project: Noble - Benson 13-15
 Project Number: UWRWE-A2591-ABN
 Project Manager: Paul Henchan

Reported:
 03/05/24 10:22

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

Summit Scientific

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

Batch BHA1037 - General Preparation

LCS (BHA1037-BS1)										
										Prepared & Analyzed: 01/30/24
pH	9.11		pH Units	9.18		99.2	95-105			
Duplicate (BHA1037-DUP1)										
										Source: 2401486-01
										Prepared & Analyzed: 01/30/24
pH	8.70		pH Units		8.89			2.16	20	

Batch BHB0799 - General Preparation

LCS (BHB0799-BS1)										
										Prepared & Analyzed: 02/26/24
pH	9.13		pH Units	9.18		99.5	95-105			
Duplicate (BHB0799-DUP1)										
										Source: 2401305-03RE1
										Prepared & Analyzed: 02/26/24
pH	8.70		pH Units		8.88			2.05	20	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Benson 13-15

Project Number: UWRWE-A2591-ABN

Project Manager: Paul Henchan

Reported:
03/05/24 10:22

Notes and Definitions

- QR-04 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
- QR-01 Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- I-04 Sample was analyzed out of recommended holding time per clients request.
- 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