

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
KNAUB 64N65W 9SWSW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-021

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**		
AST 3'	01/29/2024	3'	<0.0020	<0.0050	<0.0050	<0.010	0.0052	<0.0050	<0.0038	<0.50	<50	<50
PWV FLOOR 3'	01/29/2024	3'	<0.0020	<0.0050	<0.0050	0.012	<0.0050	0.0078	<0.0038	2.0	<50	<50
SEP DL 3'	01/29/2024	3'	<0.0020	<0.0050	<0.0050	1.5	22	20	<0.0038	710	700	<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.
KNAUB 64N65W 9SWSW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-021

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
AST 3'	01/29/2024	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
PWV FLOOR 3'	01/29/2024	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	0.0128	0.0334
SEP DL 3'	01/29/2024	3'	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0054	<0.00500	<0.00500	<0.00500	0.951	1.71

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.
KNAUB 64N65W 9SWSW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-021

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)			-	-	-	-
AST 3'	01/29/2024	3'	6.67	0.112	0.361	<2.00
PWV FLOOR 3'	01/29/2024	3'	8.81	0.275	0.183	<2.00
SEP DL 3'	01/29/2024	3'	7.79	0.519	0.463	<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.
KNAUB 64N65W 9SWSW, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C024-021

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			-	-	-	-	-	-	-	-	-	-
AST 3'	01/29/2024	3'	0.794	69.3	<0.200	<0.30	2.20	5.38	3.10	<0.260	0.0287	9.32
PWV FLOOR 3'	01/29/2024	3'	0.751	55.7	<0.200	<0.30	2.45	5.85	1.65	<0.260	0.0436	10.4
SEP DL 3'	01/29/2024	3'	0.654	40.8	<0.200	<0.30	1.69	3.62	1.62	<0.260	<0.0200	7.11

Bold faced values exceed the ECMC Table 915-1 concentrations

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

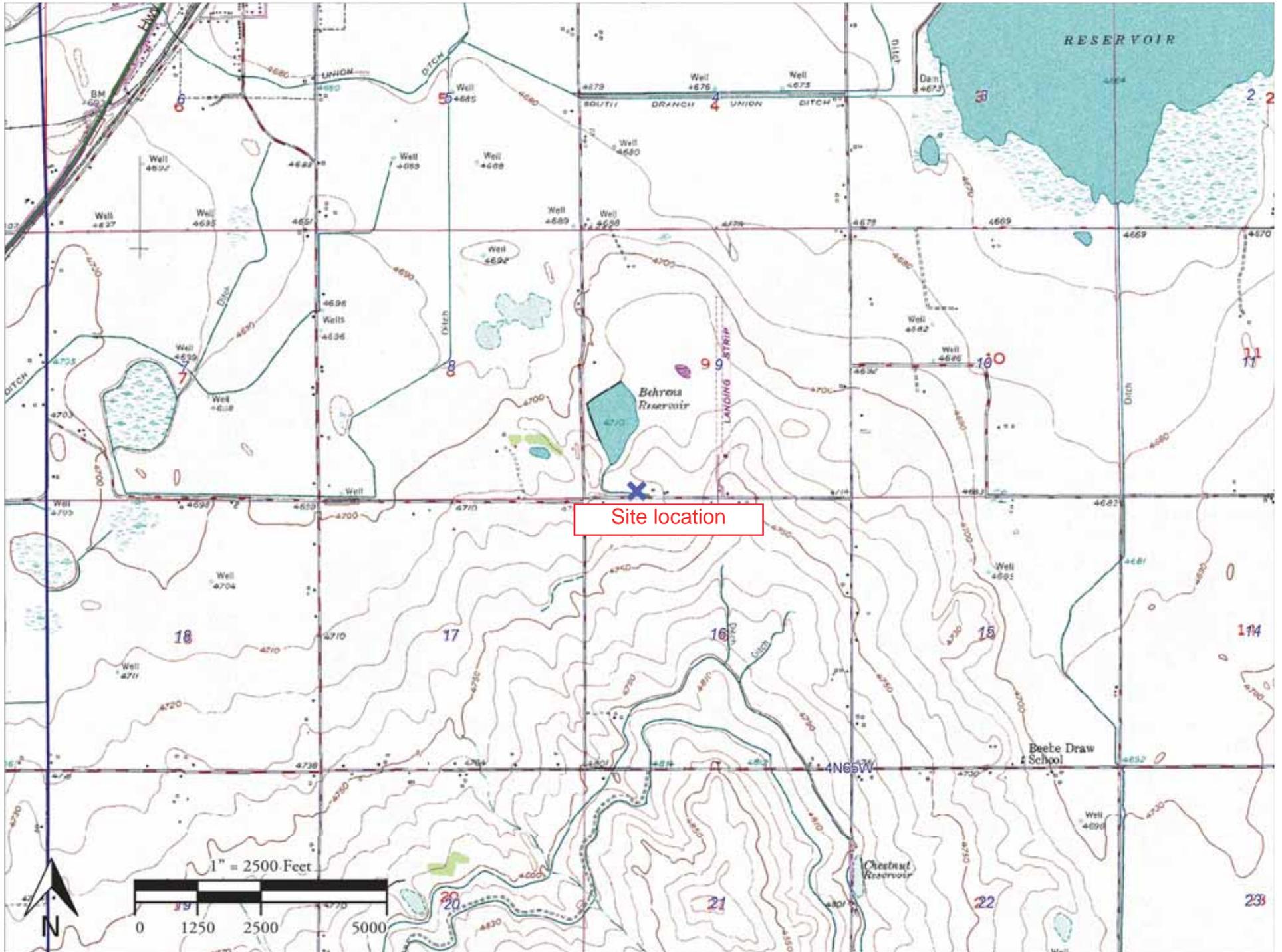
Orange highlighted cells exceed 125% of the maximum background concentration

* Indicates laboratory minimum detection limit in excess of SSL

Green highlighted cells indicate soil removed via excavation

NA - Not analyzed

Knaub 64N65W 9SWSW



Knaub 64N65W 9SWSW

API #/Facility #: 328257
Legal Description: SWSW Sec. 9, T4N, R65W
Latitude/Longitude: 40.3200328, -104.6737184 and 40.3201721, -104.6738254
Remediation # 30788
Fremont No. C024-021

Proposed
Excavation Extents
(not to scale)

Proposed
Background
Sample Location
(x5)

SEP DL 3'

PWV FLOOR 3'



Description:

#1- Knaub 64N65W 9SWSW Tank battery- PWV FLOOR 3' - Grey staining and strong HC odor



Description:

#2- Knaub 64N65W 9SWSW Tank battery- SEP DL 3'- Black/Grey staining and strong HC odor

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

February 12, 2024

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Knaub 64N65W 9SWSW

Work Order #2401555

Enclosed are the results of analyses for samples received by Summit Scientific on 01/30/24 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN

Project Manager: Paul Henchan

Reported:
02/12/24 10:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST 3'	2401555-01	Soil	01/29/24 12:00	01/30/24 16:30
SEP DL 3'	2401555-02	Soil	01/29/24 12:05	01/30/24 16:30
PWV FLOOR 3'	2401555-03	Soil	01/29/24 09:50	01/30/24 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.

S₂

S2 Work Order# 2401555

Sample Receipt Checklist

Client: Fremont Client Project ID: Knaub WYNGSW 9SWSW

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"/>	<i>on ice</i>
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"/>	<i>no time stamps</i>
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"/>	
<u>Additional Comments (if any):</u>				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

AS

Custodian Printed Name

1/30/24
Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW
Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

AST 3'
2401555-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Benzene	ND	0.0020		mg/kg	1	BHB0078	02/02/24	02/06/24	EPA 8260B	
Toluene	ND	0.0050		"	"	"	"	"	"	
Ethylbenzene	ND	0.0050		"	"	"	"	"	"	
Xylenes (total)	ND	0.010		"	"	"	"	"	"	
1,2,4-Trimethylbenzene	0.0052	0.0050		"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050		"	"	"	"	"	"	
Naphthalene	ND	0.0038		"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50		"	"	"	"	"	"	

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: 1,2-Dichloroethane-d4	0.0449	112 %		50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0367	91.6 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0386	96.4 %		50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
C10-C28 (DRO)	ND	50		mg/kg	1	BHB0075	02/02/24	02/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Surrogate: o-Terphenyl	5.94	47.5 %		30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

AST 3'
2401555-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0067	02/02/24	02/03/24	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: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0186	55.7 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0192	57.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0238	02/07/24	02/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

AST 3'
2401555-01 (Soil)

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Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	0.794	0.200	mg/kg dry	1	BHB0140	02/05/24	02/08/24	EPA 6020B
Barium	69.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	2.20	0.400	"	"	"	"	"	"
Lead	5.38	0.200	"	"	"	"	"	"
Nickel	3.10	0.400	"	"	"	"	"	"
Silver	0.0287	0.0200	"	"	"	"	"	"
Zinc	9.32	0.400	"	"	"	"	"	"
Selenium	ND	0.260	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHB0032	02/01/24	02/01/24	EPA 7196A	

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

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	75.1	0.0500	mg/L dry	1	BHA1091	01/31/24	02/02/24	EPA 6020B	
Magnesium	6.00	0.0500	"	"	"	"	"	"	
Sodium	12.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.361	0.00100	units	1	BHB0185	02/06/24	02/06/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

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 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

AST 3'
2401555-01 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BHB0154	02/06/24	02/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.112	0.0100	mmhos/cm	1	BHB0011	02/01/24	02/01/24	EPA 120.1	

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

Date Sampled: **01/29/24 12:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	6.67		pH Units	1	BHB0009	02/01/24	02/01/24	EPA 9045D	

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Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

SEP DL 3'
2401555-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0078	02/02/24	02/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	1.5	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	22	0.50	"	100	"	"	02/06/24	"	
1,3,5-Trimethylbenzene	20	0.50	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	1	"	"	02/06/24	"	
Gasoline Range Hydrocarbons	710	50	"	100	"	"	02/06/24	"	

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0474	119 %	50-150	"	"	"	02/06/24	"	
Surrogate: Toluene-d8	0.0465	116 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0488	122 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	700	50	mg/kg	1	BHB0075	02/02/24	02/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	6.10	48.8 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

SEP DL 3'
2401555-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0067	02/02/24	02/03/24	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	0.00540	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.951	0.00500	"	"	"	"	"	"	E
2-Methylnaphthalene	1.71	0.00500	"	"	"	"	"	"	E

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0161	48.4 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0160	48.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0238	02/07/24	02/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/29/24 12:05**

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 - Knaub 64N65W 9SWSW
Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

SEP DL 3'
2401555-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.654	0.200	mg/kg dry	1	BHB0140	02/05/24	02/08/24	EPA 6020B	
Barium	40.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.69	0.400	"	"	"	"	"	"	
Lead	3.62	0.200	"	"	"	"	"	"	
Nickel	1.62	0.400	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	7.11	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHB0032	02/01/24	02/01/24	EPA 7196A	

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

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	42.6	0.0500	mg/L dry	1	BHA1091	01/31/24	02/02/24	EPA 6020B	
Magnesium	5.51	0.0500	"	"	"	"	"	"	
Sodium	12.1	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.463	0.00100	units	1	BHB0185	02/06/24	02/06/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

SEP DL 3'
2401555-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.5		%	1	BHB0154	02/06/24	02/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.519	0.0100	mmhos/cm	1	BHB0011	02/01/24	02/01/24	EPA 120.1	

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

Date Sampled: **01/29/24 12:05**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.79		pH Units	1	BHB0009	02/01/24	02/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

PWV FLOOR 3'
2401555-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BHB0078	02/02/24	02/06/24	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	0.012	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	0.0078	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	2.0	0.50	"	"	"	"	"	"	

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0416	104 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0393	98.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0407	102 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BHB0075	02/02/24	02/06/24	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	8.23	65.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

PWV FLOOR 3'
2401555-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BHB0067	02/02/24	02/03/24	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	0.0128	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0334	0.00500	"	"	"	"	"	"	

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0134	40.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0156	46.8 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	ND	2.00	mg/L	1	BHB0238	02/07/24	02/08/24	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **01/29/24 09:50**

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 - Knaub 64N65W 9SWSW
Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

PWV FLOOR 3'
2401555-03 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.751	0.200	mg/kg dry	1	BHB0140	02/05/24	02/08/24	EPA 6020B	
Barium	55.7	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.45	0.400	"	"	"	"	"	"	
Lead	5.85	0.200	"	"	"	"	"	"	
Nickel	1.65	0.400	"	"	"	"	"	"	
Silver	0.0436	0.0200	"	"	"	"	"	"	
Zinc	10.4	0.400	"	"	"	"	"	"	
Selenium	ND	0.260	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BHB0032	02/01/24	02/01/24	EPA 7196A	

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

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	155	0.0500	mg/L dry	1	BHA1091	01/31/24	02/02/24	EPA 6020B	
Magnesium	19.3	0.0500	"	"	"	"	"	"	
Sodium	9.08	0.0500	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.183	0.00100	units	1	BHB0185	02/06/24	02/06/24	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW
 Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

PWV FLOOR 3'
2401555-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.1		%	1	BHB0154	02/06/24	02/06/24	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.275	0.0100	mmhos/cm	1	BHB0011	02/01/24	02/01/24	EPA 120.1	

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

Date Sampled: **01/29/24 09:50**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.81		pH Units	1	BHB0009	02/01/24	02/01/24	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWW
Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

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 BHB0078 - EPA 5030 Soil MS

Blank (BHB0078-BLK1)

Prepared: 02/02/24 Analyzed: 02/05/24

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0461		"	0.0400		115	50-150			
<i>Surrogate: Toluene-d8</i>	0.0397		"	0.0400		99.3	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0389		"	0.0400		97.3	50-150			

LCS (BHB0078-BS1)

Prepared: 02/02/24 Analyzed: 02/05/24

Benzene	0.100	0.0020	mg/kg	0.100		100	70-130			
Toluene	0.115	0.0050	"	0.100		115	70-130			
Ethylbenzene	0.121	0.0050	"	0.100		121	70-130			
m,p-Xylene	0.246	0.010	"	0.200		123	70-130			
o-Xylene	0.122	0.0050	"	0.100		122	70-130			
1,2,4-Trimethylbenzene	0.119	0.0050	"	0.100		119	70-130			
1,3,5-Trimethylbenzene	0.118	0.0050	"	0.100		118	70-130			
Naphthalene	0.121	0.0038	"	0.100		121	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0422		"	0.0400		106	50-150			
<i>Surrogate: Toluene-d8</i>	0.0362		"	0.0400		90.6	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0388		"	0.0400		97.0	50-150			

Matrix Spike (BHB0078-MS1)

Source: 2401549-01

Prepared: 02/02/24 Analyzed: 02/05/24

Benzene	0.0868	0.0020	mg/kg	0.100	ND	86.8	70-130			
Toluene	0.0994	0.0050	"	0.100	ND	99.4	70-130			
Ethylbenzene	0.0945	0.0050	"	0.100	ND	94.5	70-130			
m,p-Xylene	0.194	0.010	"	0.200	ND	97.0	70-130			
o-Xylene	0.0935	0.0050	"	0.100	ND	93.5	70-130			
1,2,4-Trimethylbenzene	0.0849	0.0050	"	0.100	ND	84.9	70-130			
1,3,5-Trimethylbenzene	0.0843	0.0050	"	0.100	ND	84.3	70-130			
Naphthalene	0.0734	0.0038	"	0.100	ND	73.4	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0442		"	0.0400		111	50-150			
<i>Surrogate: Toluene-d8</i>	0.0386		"	0.0400		96.6	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0392		"	0.0400		98.0	50-150			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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 BHB0078 - EPA 5030 Soil MS

Matrix Spike Dup (BHB0078-MSD1)	Source: 2401549-01			Prepared: 02/02/24 Analyzed: 02/05/24						
Benzene	0.0826	0.0020	mg/kg	0.100	ND	82.6	70-130	4.99	30	
Toluene	0.0931	0.0050	"	0.100	ND	93.1	70-130	6.55	30	
Ethylbenzene	0.0911	0.0050	"	0.100	ND	91.1	70-130	3.62	30	
m,p-Xylene	0.185	0.010	"	0.200	ND	92.6	70-130	4.59	30	
o-Xylene	0.0925	0.0050	"	0.100	ND	92.5	70-130	1.10	30	
1,2,4-Trimethylbenzene	0.0787	0.0050	"	0.100	ND	78.7	70-130	7.59	30	
1,3,5-Trimethylbenzene	0.0788	0.0050	"	0.100	ND	78.8	70-130	6.81	30	
Naphthalene	0.0646	0.0038	"	0.100	ND	64.6	70-130	12.7	30	QM-07
Surrogate: 1,2-Dichloroethane-d4	0.0519		"	0.0400		130	50-150			
Surrogate: Toluene-d8	0.0372		"	0.0400		93.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0407		"	0.0400		102	50-150			

Summit Scientific

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW
 Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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 BHB0075 - EPA 3550A

Blank (BHB0075-BLK1)

Prepared: 02/02/24 Analyzed: 02/05/24

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	10.4		"	12.5		83.3	30-150				

LCS (BHB0075-BS1)

Prepared: 02/02/24 Analyzed: 02/05/24

C10-C28 (DRO)	427	50	mg/kg	500		85.3	70-130				
Surrogate: <i>o</i> -Terphenyl	9.04		"	12.5		72.3	30-150				

Matrix Spike (BHB0075-MS1)

Source: 2401549-01

Prepared: 02/02/24 Analyzed: 02/05/24

C10-C28 (DRO)	433	50	mg/kg	500	16.6	83.4	70-130				
Surrogate: <i>o</i> -Terphenyl	9.80		"	12.5		78.4	30-150				

Matrix Spike Dup (BHB0075-MSD1)

Source: 2401549-01

Prepared: 02/02/24 Analyzed: 02/05/24

C10-C28 (DRO)	419	50	mg/kg	500	16.6	80.5	70-130	3.32	20		
Surrogate: <i>o</i> -Terphenyl	9.59		"	12.5		76.7	30-150				

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Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

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 BHB0067 - EPA 5030 Soil MS

Blank (BHB0067-BLK1)

Prepared & Analyzed: 02/02/24

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>0.0331</i>		"	<i>0.0333</i>		<i>99.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0315</i>		"	<i>0.0333</i>		<i>94.5</i>	<i>40-150</i>			

LCS (BHB0067-BS1)

Prepared & Analyzed: 02/02/24

Acenaphthene	0.0343	0.00500	mg/kg	0.0333	103	31-137
Anthracene	0.0322	0.00500	"	0.0333	96.5	30-120
Benzo (a) anthracene	0.0306	0.00500	"	0.0333	91.9	30-120
Benzo (a) pyrene	0.0320	0.00500	"	0.0333	95.9	30-120
Benzo (b) fluoranthene	0.0303	0.00500	"	0.0333	90.8	30-120
Benzo (k) fluoranthene	0.0271	0.00500	"	0.0333	81.4	30-120
Chrysene	0.0320	0.00500	"	0.0333	95.9	30-120
Dibenz (a,h) anthracene	0.0281	0.00500	"	0.0333	84.3	30-120
Fluoranthene	0.0310	0.00500	"	0.0333	92.9	30-120
Fluorene	0.0378	0.00500	"	0.0333	113	30-120
Indeno (1,2,3-cd) pyrene	0.0355	0.00500	"	0.0333	106	30-120
Pyrene	0.0274	0.00500	"	0.0333	82.3	35-142
1-Methylnaphthalene	0.0351	0.00500	"	0.0333	105	35-142
2-Methylnaphthalene	0.0350	0.00500	"	0.0333	105	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0329</i>		"	<i>0.0333</i>	<i>98.7</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0308</i>		"	<i>0.0333</i>	<i>92.3</i>	<i>40-150</i>

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

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 BHB0067 - EPA 5030 Soil MS

Matrix Spike (BHB0067-MS1)

Source: 2401543-11

Prepared & Analyzed: 02/02/24

Acenaphthene	0.0239	0.00500	mg/kg	0.0333	ND	71.7	31-137			
Anthracene	0.0185	0.00500	"	0.0333	ND	55.6	30-120			
Benzo (a) anthracene	0.0160	0.00500	"	0.0333	ND	48.0	30-120			
Benzo (a) pyrene	0.0166	0.00500	"	0.0333	ND	49.8	30-120			
Benzo (b) fluoranthene	0.0161	0.00500	"	0.0333	ND	48.3	30-120			
Benzo (k) fluoranthene	0.0164	0.00500	"	0.0333	ND	49.1	30-120			
Chrysene	0.0165	0.00500	"	0.0333	ND	49.4	30-120			
Dibenz (a,h) anthracene	0.0255	0.00500	"	0.0333	ND	76.6	30-120			
Fluoranthene	0.0184	0.00500	"	0.0333	ND	55.3	30-120			
Fluorene	0.0226	0.00500	"	0.0333	ND	67.9	30-120			
Indeno (1,2,3-cd) pyrene	0.0278	0.00500	"	0.0333	ND	83.3	30-120			
Pyrene	0.0221	0.00500	"	0.0333	ND	66.3	35-142			
1-Methylnaphthalene	0.0206	0.00500	"	0.0333	ND	61.9	15-130			
2-Methylnaphthalene	0.0215	0.00500	"	0.0333	ND	64.6	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0201		"	0.0333		60.2	40-150			
Surrogate: Fluoranthene-d10	0.0188		"	0.0333		56.3	40-150			

Matrix Spike Dup (BHB0067-MSD1)

Source: 2401543-11

Prepared & Analyzed: 02/02/24

Acenaphthene	0.0200	0.00500	mg/kg	0.0333	ND	60.1	31-137	17.6	30
Anthracene	0.0193	0.00500	"	0.0333	ND	57.9	30-120	4.06	30
Benzo (a) anthracene	0.0191	0.00500	"	0.0333	ND	57.4	30-120	17.8	30
Benzo (a) pyrene	0.0179	0.00500	"	0.0333	ND	53.6	30-120	7.30	30
Benzo (b) fluoranthene	0.0189	0.00500	"	0.0333	ND	56.8	30-120	16.0	30
Benzo (k) fluoranthene	0.0186	0.00500	"	0.0333	ND	55.8	30-120	12.7	30
Chrysene	0.0186	0.00500	"	0.0333	ND	55.9	30-120	12.3	30
Dibenz (a,h) anthracene	0.0209	0.00500	"	0.0333	ND	62.7	30-120	19.9	30
Fluoranthene	0.0196	0.00500	"	0.0333	ND	58.7	30-120	5.94	30
Fluorene	0.0190	0.00500	"	0.0333	ND	57.0	30-120	17.5	30
Indeno (1,2,3-cd) pyrene	0.0225	0.00500	"	0.0333	ND	67.4	30-120	21.1	30
Pyrene	0.0209	0.00500	"	0.0333	ND	62.8	35-142	5.43	30
1-Methylnaphthalene	0.0200	0.00500	"	0.0333	ND	60.0	15-130	3.02	50
2-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.7	15-130	11.3	50
Surrogate: 2-Methylnaphthalene-d10	0.0189		"	0.0333		56.6	40-150		
Surrogate: Fluoranthene-d10	0.0197		"	0.0333		59.0	40-150		

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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 BHB0238 - EPA 3050B

Blank (BHB0238-BLK1)

Prepared: 02/07/24 Analyzed: 02/08/24

Boron ND 2.00 mg/L

LCS (BHB0238-BS1)

Prepared: 02/07/24 Analyzed: 02/08/24

Boron 5.04 2.00 mg/L 5.00 101 80-120

Duplicate (BHB0238-DUP1)

Source: 2401555-01

Prepared: 02/07/24 Analyzed: 02/08/24

Boron 0.149 2.00 mg/L 0.134 10.9 20

Matrix Spike (BHB0238-MS1)

Source: 2401555-01

Prepared: 02/07/24 Analyzed: 02/08/24

Boron 5.02 2.00 mg/L 5.00 0.134 97.7 75-125

Matrix Spike Dup (BHB0238-MSD1)

Source: 2401555-01

Prepared: 02/07/24 Analyzed: 02/08/24

Boron 4.98 2.00 mg/L 5.00 0.134 96.8 75-125 0.869 25

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW
Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BHB0140 - EPA 3050B

Blank (BHB0140-BLK1)

Prepared: 02/05/24 Analyzed: 02/08/24

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 (BHB0140-BS1)

Prepared: 02/05/24 Analyzed: 02/08/24

Arsenic	43.1	0.200	mg/kg wet	40.0	108	80-120
Barium	36.9	0.400	"	40.0	92.3	80-120
Cadmium	1.90	0.200	"	2.00	95.0	80-120
Copper	42.5	0.400	"	40.0	106	80-120
Lead	18.9	0.200	"	20.0	94.4	80-120
Nickel	42.1	0.400	"	40.0	105	80-120
Silver	1.95	0.0200	"	2.00	97.7	80-120
Zinc	42.5	0.400	"	40.0	106	80-120
Selenium	4.74	0.260	"	4.00	118	80-120

Duplicate (BHB0140-DUP1)

Source: 2401535-01

Prepared: 02/05/24 Analyzed: 02/08/24

Arsenic	0.802	0.200	mg/kg dry	0.743	7.69	20	
Barium	112	0.400	"	69.7	46.7	20	QR-04
Cadmium	0.173	0.200	"	0.162	6.45	20	
Copper	2.74	0.400	"	2.34	15.7	20	
Lead	5.36	0.200	"	4.79	11.3	20	
Nickel	1.84	0.400	"	1.71	6.87	20	
Silver	0.0189	0.0200	"	0.0162	15.4	20	
Zinc	7.16	0.400	"	6.98	2.51	20	
Selenium	ND	0.260	"	ND		20	

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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 BHB0140 - EPA 3050B

Matrix Spike (BHB0140-MS1)

Source: 2401535-01

Prepared: 02/05/24 Analyzed: 02/08/24

Arsenic	16.6	0.200	mg/kg dry	45.0	0.743	35.1	75-125				QM-07
Barium	206	0.400	"	45.0	69.7	304	75-125				QM-07
Cadmium	2.22	0.200	"	2.25	0.162	91.3	75-125				
Copper	19.8	0.400	"	45.0	2.34	38.8	75-125				QM-07
Lead	24.1	0.200	"	22.5	4.79	85.8	75-125				
Nickel	17.8	0.400	"	45.0	1.71	35.6	75-125				QM-07
Silver	2.05	0.0200	"	2.25	0.0162	90.5	75-125				
Zinc	23.9	0.400	"	45.0	6.98	37.6	75-125				QM-07
Selenium	5.07	0.260	"	4.50	ND	113	75-125				

Matrix Spike Dup (BHB0140-MSD1)

Source: 2401535-01

Prepared: 02/05/24 Analyzed: 02/08/24

Arsenic	16.6	0.200	mg/kg dry	45.0	0.743	35.2	75-125	0.288	25		QM-07
Barium	227	0.400	"	45.0	69.7	350	75-125	9.58	25		QM-07
Cadmium	2.43	0.200	"	2.25	0.162	101	75-125	9.38	25		
Copper	19.9	0.400	"	45.0	2.34	38.9	75-125	0.381	25		QM-07
Lead	26.5	0.200	"	22.5	4.79	96.4	75-125	9.50	25		
Nickel	17.7	0.400	"	45.0	1.71	35.6	75-125	0.172	25		QM-07
Silver	2.24	0.0200	"	2.25	0.0162	99.0	75-125	8.82	25		
Zinc	24.2	0.400	"	45.0	6.98	38.3	75-125	1.27	25		QM-07
Selenium	5.00	0.260	"	4.50	ND	111	75-125	1.30	25		

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BHB0032 - 3060A Mod

Blank (BHB0032-BLK1)

Prepared & Analyzed: 02/01/24

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BHB0032-BS1)

Prepared & Analyzed: 02/01/24

Chromium, Hexavalent 24.5 0.30 mg/kg wet 25.0 98.0 80-120

Duplicate (BHB0032-DUP1)

Source: 2401533-01

Prepared & Analyzed: 02/01/24

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BHB0032-MS1)

Source: 2401533-01

Prepared & Analyzed: 02/01/24

Chromium, Hexavalent 23.3 0.30 mg/kg dry 25.9 ND 89.8 75-125

Matrix Spike Dup (BHB0032-MSD1)

Source: 2401533-01

Prepared & Analyzed: 02/01/24

Chromium, Hexavalent 23.5 0.30 mg/kg dry 25.9 ND 90.8 75-125 1.11 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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

Summit Scientific

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

Batch BHA1091 - General Preparation

Blank (BHA1091-BLK1)

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

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

LCS (BHA1091-BS1)

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

Calcium	5.49	0.0500	mg/L wet	5.00	110	70-130				
Magnesium	5.02	0.0500	"	5.00	100	70-130				
Sodium	5.09	0.0500	"	5.00	102	70-130				

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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 BHB0154 - General Preparation

Duplicate (BHB0154-DUP1)

Source: 2401533-01

Prepared & Analyzed: 02/06/24

% Solids	96.5		%		96.4			0.114		20	
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Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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 BHB0011 - General Preparation

Blank (BHB0011-BLK1)

Prepared & Analyzed: 02/01/24

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BHB0011-BS1)

Prepared & Analyzed: 02/01/24

Specific Conductance (EC) 0.157 0.0100 mmhos/cm 0.150 105 95-105

Duplicate (BHB0011-DUP1)

Source: 2401549-01

Prepared & Analyzed: 02/01/24

Specific Conductance (EC) 0.124 0.0100 mmhos/cm 0.125 0.966 20

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
 Project Manager: Paul Henchan

Reported:
 02/12/24 10:33

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 BHB0009 - General Preparation

LCS (BHB0009-BS1)

Prepared & Analyzed: 02/01/24

pH	9.12	pH Units	9.18	99.3	95-105
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Duplicate (BHB0009-DUP1)

Source: 2401545-01

Prepared & Analyzed: 02/01/24

pH	7.87	pH Units	7.90	0.380	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Knaub 64N65W 9SWSW

Project Number: UWRWE-A3469-ABN
Project Manager: Paul Henchan

Reported:
02/12/24 10:33

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.
- 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.
- E The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
- 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