

FREMONT ENVIRONMENTAL INC.

March 14, 2024

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

Subject: **Facility Closure Data Submittal**
Richter USX AB 27-13 Tank NWSW
Sec. 27, T7N, R64W
Weld County, Colorado
Fremont Project No. C023-177
Facility # 420815, Remediation # 27765

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted facility closure activities for the Noble Energy Inc. (Noble) Richter USX AB 27-13 Tank. Impacted soil was encountered during abandonment activities, subsequent forms were submitted to the state. Details of the Richter USX AB 27-13 Tank facility closure activities are documented in the attached Closure Report. Groundwater was not encountered during facility 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

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

Tank Battery Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Partially Buried Vault Closure
Site Name & COGCC Facility Number:		Date:						Remediation Project #:
Associated Wells:		Age of Site:						Number of Photos Attached:
Location: (GPS coordinates of southeaster berm)								Estimated Facility Size (acres):
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
USCS Soil Type:					Estimated Depth to Groundwater:			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
Tanks								
Tank Contents								
Size (barrels)								
Age								
Construction Material								
Tank type (AST/DRU, etc.)								
Visual Integrity of Tank								
Condition of tank footprint								
PID Readings								
Soil impacts present at valves or hatches?								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								
Other observations regarding tanks:								
Separators								
Separator size								
Vertical or Horizontal								
Age								
Soil impacts observed? If yes,								
PID Readings								
Sample taken? Location/ Sample ID#								
Photo Number(s)								
Other observations regarding separators								
Third Party Equipment								
Type								
Age								

Third Party <i>Owner</i>														
Removal Date														
Sample taken? <i>Location/ Sample</i>														
PID Readings														
Photo Number(s)														
Other Facility Equipment														
Equipment type														
Equipment <i>Condition</i>														
Age														
Soil impacts <i>Observed during</i>														
PID Readings														
Sample taken? <i>Location/ Sample</i>														
Photo Number(s)														
Other observations regarding other facility or third party equipment:														
Summary														
Was impacted soil identified?														
<div> <div>No</div> <div>Yes - less than 10 cubic yards</div> <div>Yes - more than 10 cubic yards</div> </div>														
Total number of samples field screened:					Total number of samples collected:									
Highest PID Reading:					Total number of samples submitted to lab for analysis:									
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?														
Was groundwater encountered during the investigation?														
<div> <div>No</div> <div>Yes - not impacted or in contact with impacted soils</div> <div>Yes - groundwater impacted and/or in contact with impacted soils</div> </div>														
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:														

Buried or Partially Buried Vessel Closure Checklist

COGCC Rule 911.a.(4) Environmental Site Closure Assessment Field Form

Additional attachments (optional):		Pit Closure		Wellhead Closure		Flowline Closure		Tank Battery Closure
Site Name & COGCC Facility Number:		Date:						Remediation Project #:
Associated Wells:		Age of Site:						Number of Photos Attached:
Location: (GPS coordinates of vault or southeastern tank berm for multiple)								Estimated Facility Size (acres):
General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)								
USCS Soil Type:					Estimated Depth to Groundwater:			
Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)								
Buried or Partially Buried Vessels								
Tank Contents								
Size (barrels)								
Age								
Construction Material								
Visual Integrity of Tank								
Condition of tank Foundation								
PID Readings								
Condition of Dimple Line								
PID Readings								
Sample taken? Location/Sample ID#								
Photo Number(s)								
Other observations regarding partially buried vessels: The Western sidewall of PWV excavation was the tie-in point for the dumpline to the separator. Dumplines were pulled								
Summary								
Was impacted soil identified? No Yes - less than 10 cubic yards Yes - more than 10 cubic yards								
Total number of samples field screened:					Total number of samples collected:			
Highest PID Reading:					Total number of samples submitted to lab for analysis:			
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?								
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.
RICHTER USX AB 27-13 TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-177

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**		
AST01 0.5feet	06/28/2023	0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
AST02 0.5feet	06/28/2023	0.5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
PWV01 W 3feet	06/28/2023	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	0.011	63	<0.50	<50
PWV02 W 3feet	06/28/2023	3	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50
SEP DL 8feet	06/28/2023	8	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<50	<0.50	<50

Bold faced values exceed the ECMC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

** Summation of GRO+DRO+ORO must be less than 500 mg/kg

NA - Not analyzed

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
RICHTER USX AB 27-13 TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-177

Sample ID	Sample Date	Depth (ft)	Acenaphthen e (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
AST01 0.5feet	06/28/2023	0.5	<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
AST02 0.5feet	06/28/2023	0.5	<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
PWV01 W 3feet	06/28/2023	3	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0172	<0.00500	<0.00500	0.0633	0.0691
PWV02 W 3feet	06/28/2023	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
SEP DL 8feet	06/28/2023	8	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500

Bold faced values exceed the ECMC Table 915-1 concentrations

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

* Indicates laboratory minimum detection limit in excess of SSL

NA - Not analyzed

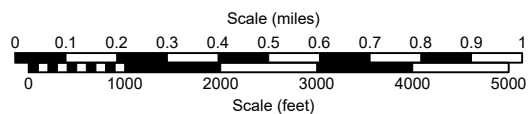
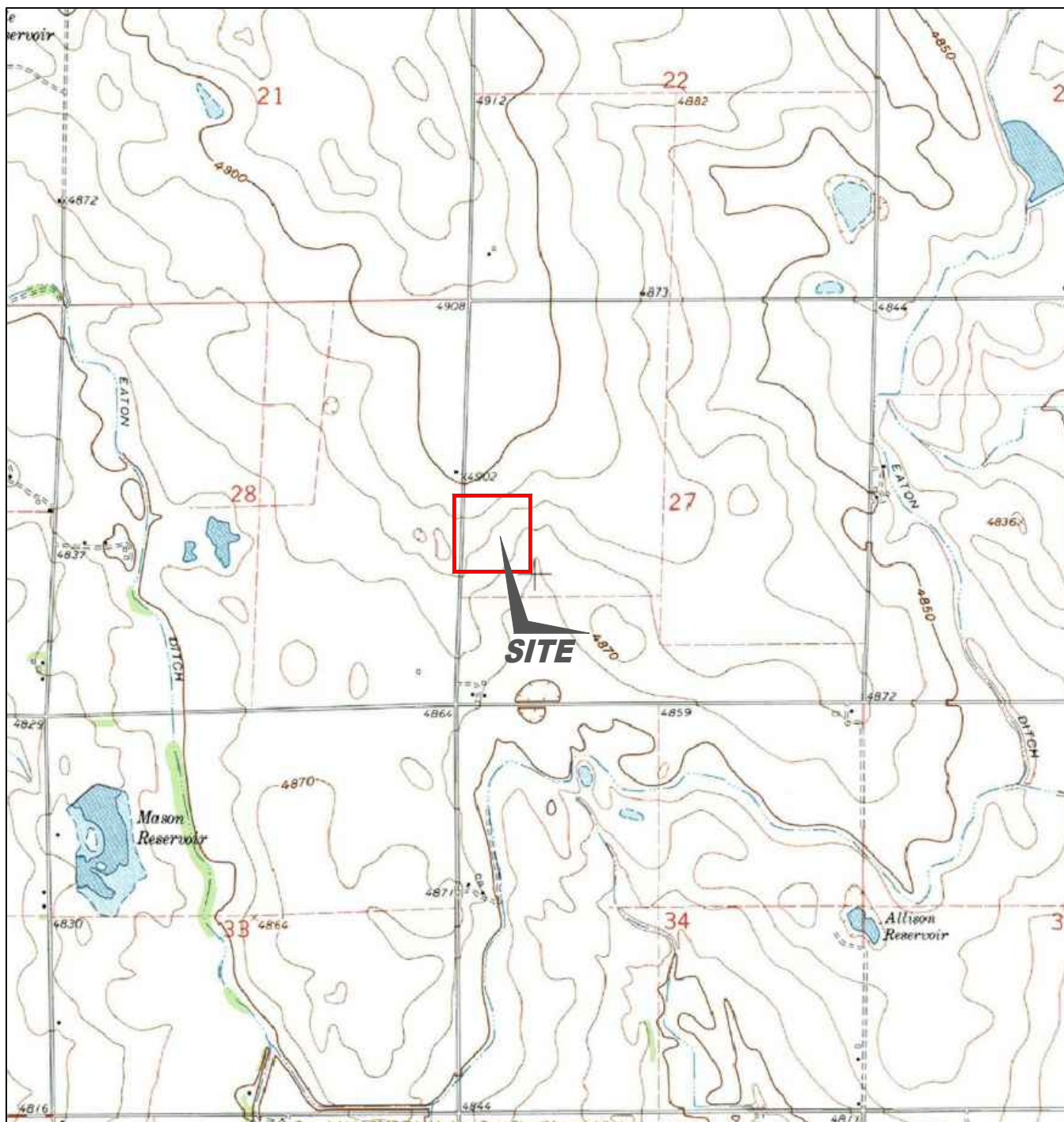
TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
RICHTER USX AB 27-13 TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-177

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
AST01 0.5feet	06/28/2023	0.5	7.95	4.59	3.06	0.456
AST02 0.5feet	06/28/2023	0.5	7.28	0.131	0.0177	0.158
PWV01 W 3feet	06/28/2023	3	7.80	0.565	4.69	0.0985
PWV02 W 3feet	06/28/2023	3	7.86	1.18	1.36	0.118
SEP DL 8feet	06/28/2023	8	8.19	0.286	0.326	0.141

Bold faced values exceed the ECMC Table 915-1 concentrations

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

NA - Not analyzed



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ Richter USX AB 27-13 Tank
NWSW Section 27, T7N, R64W, 6th PM
Weld County, Colorado
40.541485°, -104.545299°

Project No. C023-177	API #	Location ID 420815
Date 11/16/23	Remediation # 27765	Filename 23177T



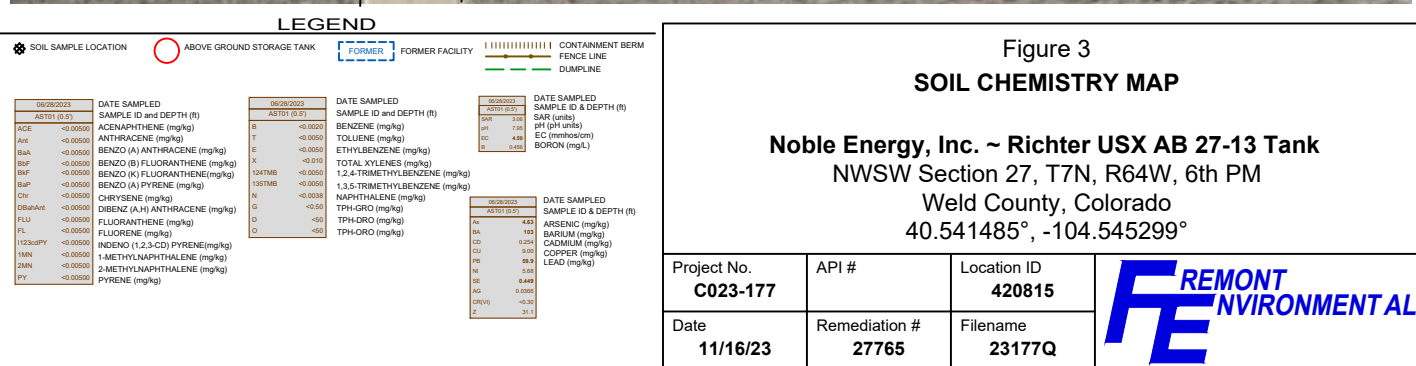


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Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 12, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

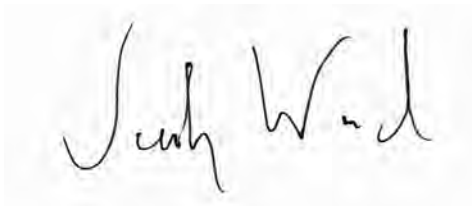
Wellington, CO 80549

RE: Noble - Richter USXAB 27-13 Tank

Work Order #2306627

Enclosed are the results of analyses for samples received by Summit Scientific on 06/29/23 16:42. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01 0.5feet	2306627-01	Soil	06/28/23 10:47	06/29/23 16:42
AST02 0.5feet	2306627-02	Soil	06/28/23 10:49	06/29/23 16:42
SEP DL 8feet	2306627-03	Soil	06/28/23 10:51	06/29/23 16:42
PWV02 W 3feet	2306627-04	Soil	06/28/23 12:28	06/29/23 16:42
PWV01 W 3feet	2306627-05	Soil	06/28/23 12:30	06/29/23 16:42

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.

Client: Fremont Environmental		Send Data To: Project Manager: Paul Henehan		Send Invoice To: Company: Noble	
Address:		E-Mail: Fremont Distribution List		Project Name/Location: Richter WSX AB 27-13 Tank	
City/State/Zip:				AFE#:	
Phone: 303-261-6246		Project Name: Richter WSX AB 27-13 Tank		PO/Billing Codes: UWRWE-A2763-ABN	
Sampler Name: Stanley Gilbert		Project Number:		Contact: Mike Montoya	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate		HOLD	
1	AST01 0.5 feet	6/28/23	10:47	2			X			X			X	X	X	X					
2	AST02 0.5 feet		10:49																		
3	SEP DL 8 feet		10:51																		
4	PWV02 W 3 feet		12:28																		
5	PWV01 W 3 feet		12:30																		
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time: 6/28/23 16:42	Received by: Summit North	Date/Time: 6/28/23 16:42	TAT Business Days	Field DO	Notes:
Relinquished by: 52	Date/Time: 6/28/23 16:42	Received by:	Date/Time: 6/28/23 16:42	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 8.3	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2306627Client: Fremont Client Project ID: Richter USXAB 27-13 TentShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐
☐ ☒ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 8.5 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on file
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

V. H. Wad

Custodian Printed Name

6/28/23 16:42

Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST01 0.5feet
2306627-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0403	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0452	113 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0456	114 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.2	81.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST01 0.5feet
2306627-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0203	60.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	63.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.456	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 10:47**

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 - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST01 0.5feet
2306627-01 (Soil)

Summit Scientific

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

Calcium	224	0.0551	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	108	0.0551	"	"	"	"	"	"
Sodium	223	0.0551	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.06	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.7		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.59	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST02 0.5feet
2306627-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0378	94.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0441	110 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0453	113 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.1	89.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST02 0.5feet
2306627-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0192	57.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0227	68.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.158	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 10:49**

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 - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST02 0.5feet
2306627-02 (Soil)

Summit Scientific

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

Calcium	227	0.0547	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	46.6	0.0547	"	"	"	"	"	"
Sodium	1.12	0.0547	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0177	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.131	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.28		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

SEP DL 8feet
2306627-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0446	111 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0450	113 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.9	86.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

SEP DL 8feet
2306627-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0244	73.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0274	82.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.141	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 10:51**

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 - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

SEP DL 8feet
2306627-03 (Soil)

Summit Scientific

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

Calcium	16.5	0.0568	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	3.82	0.0568	"	"	"	"	"	"
Sodium	5.65	0.0568	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.326	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.286	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV02 W 3feet
2306627-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0375	93.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0446	112 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0454	114 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.86	54.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV02 W 3feet
2306627-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0198	59.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0200	60.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.118	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 12:28**

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 - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV02 W 3feet
2306627-04 (Soil)

Summit Scientific

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

Calcium	57.7	0.0581	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	19.8	0.0581	"	"	"	"	"	"
Sodium	47.1	0.0581	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.36	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.18	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV01 W 3feet
2306627-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	0.011	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0438	110 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0449	112 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	63	50	mg/kg	1	BGF1134	06/30/23	07/01/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.9	103 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV01 W 3feet
2306627-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/04/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0172	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0633	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0691	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0219	65.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0181	54.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0985	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

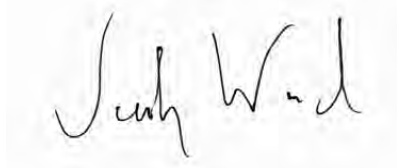
Soluble Nutrients by EPA 6020/USDA60 6(2) - Saturated Paste Extraction

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental
PO Box 1289
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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

**PWV01 W 3feet
2306627-05 (Soil)**

Summit Scientific

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

Calcium	1.02	0.0556	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	0.422	0.0556	"	"	"	"	"	"
Sodium	22.3	0.0556	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.69	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.565	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

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

Batch BGF1129 - EPA 5030 Soil MS

Blank (BGF1129-BLK1)

Prepared: 06/30/23 Analyzed: 07/01/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0400		96.7	50-150			
Surrogate: Toluene-d8	0.0445		"	0.0400		111	50-150			
Surrogate: 4-Bromofluorobenzene	0.0460		"	0.0400		115	50-150			

LCS (BGF1129-BS1)

Prepared: 06/30/23 Analyzed: 07/01/23

Benzene	0.112	0.0020	mg/kg	0.125		89.4	70-130			
Toluene	0.154	0.0050	"	0.125		123	70-130			
Ethylbenzene	0.150	0.0050	"	0.125		120	70-130			
m,p-Xylene	0.304	0.010	"	0.250		122	70-130			
o-Xylene	0.142	0.0050	"	0.125		114	70-130			
1,2,4-Trimethylbenzene	0.151	0.0050	"	0.125		121	70-130			
1,3,5-Trimethylbenzene	0.152	0.0050	"	0.125		122	70-130			
Naphthalene	0.129	0.0038	"	0.125		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0442		"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene	0.0437		"	0.0400		109	50-150			

Matrix Spike (BGF1129-MS1)

Source: 2306373-01

Prepared: 06/30/23 Analyzed: 07/01/23

Benzene	0.112	0.0020	mg/kg	0.125	ND	89.9	70-130			
Toluene	0.155	0.0050	"	0.125	ND	124	70-130			
Ethylbenzene	0.154	0.0050	"	0.125	ND	123	70-130			
m,p-Xylene	0.313	0.010	"	0.250	ND	125	70-130			
o-Xylene	0.150	0.0050	"	0.125	ND	120	70-130			
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125	ND	123	70-130			
Naphthalene	0.144	0.0038	"	0.125	ND	115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0400		98.4	50-150			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0442		"	0.0400		110	50-150			

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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BGF1129 - EPA 5030 Soil MS

Matrix Spike Dup (BGF1129-MSD1)		Source: 2306373-01			Prepared: 06/30/23 Analyzed: 07/01/23					
Benzene	0.109	0.0020	mg/kg	0.125	ND	87.5	70-130	2.76	30	
Toluene	0.153	0.0050	"	0.125	ND	122	70-130	1.36	30	
Ethylbenzene	0.147	0.0050	"	0.125	ND	118	70-130	4.29	30	
m,p-Xylene	0.300	0.010	"	0.250	ND	120	70-130	4.12	30	
o-Xylene	0.140	0.0050	"	0.125	ND	112	70-130	6.89	30	
1,2,4-Trimethylbenzene	0.156	0.0050	"	0.125	ND	124	70-130	0.503	30	
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125	ND	121	70-130	1.30	30	
Naphthalene	0.138	0.0038	"	0.125	ND	110	70-130	4.66	30	
Surrogate: 1,2-Dichloroethane-d4		0.0398	"	0.0400		99.4	50-150			
Surrogate: Toluene-d8		0.0441	"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene		0.0436	"	0.0400		109	50-150			

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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGF1134 - EPA 3550A

Blank (BGF1134-BLK1)

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	10.2		"	12.5		81.8	30-150			

LCS (BGF1134-BS1)

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	363	50	mg/kg	500		72.6	70-130			
Surrogate: o-Terphenyl	12.3		"	12.5		98.2	30-150			

Matrix Spike (BGF1134-MS1)

Source: 2306373-01

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	393	50	mg/kg	500	37.3	71.1	70-130			
Surrogate: o-Terphenyl	11.9		"	12.5		95.2	30-150			

Matrix Spike Dup (BGF1134-MSD1)

Source: 2306373-01

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	406	50	mg/kg	500	37.3	73.7	70-130	3.20	20	
Surrogate: o-Terphenyl	12.4		"	12.5		99.5	30-150			

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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PAH by EPA Method 8270D SIM - Quality Control

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

Batch BGG0020 - EPA 5030 Soil MS

Blank (BGG0020-BLK1)

Prepared & Analyzed: 07/03/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0393		"	0.0333		118	40-150			
Surrogate: Fluoranthene-d10	0.0323		"	0.0333		96.8	40-150			

LCS (BGG0020-BS1)

Prepared & Analyzed: 07/03/23

Acenaphthene	0.0364	0.00500	mg/kg	0.0333		109	31-137			
Anthracene	0.0350	0.00500	"	0.0333		105	30-120			
Benzo (a) anthracene	0.0390	0.00500	"	0.0333		117	30-120			
Benzo (a) pyrene	0.0345	0.00500	"	0.0333		103	30-120			
Benzo (b) fluoranthene	0.0376	0.00500	"	0.0333		113	30-120			
Benzo (k) fluoranthene	0.0398	0.00500	"	0.0333		119	30-120			
Chrysene	0.0393	0.00500	"	0.0333		118	30-120			
Dibenz (a,h) anthracene	0.0356	0.00500	"	0.0333		107	30-120			
Fluoranthene	0.0317	0.00500	"	0.0333		95.2	30-120			
Fluorene	0.0366	0.00500	"	0.0333		110	30-120			
Indeno (1,2,3-cd) pyrene	0.0389	0.00500	"	0.0333		117	30-120			
Pyrene	0.0366	0.00500	"	0.0333		110	35-142			
1-Methylnaphthalene	0.0371	0.00500	"	0.0333		111	35-142			
2-Methylnaphthalene	0.0398	0.00500	"	0.0333		119	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0364		"	0.0333		109	40-150			
Surrogate: Fluoranthene-d10	0.0381		"	0.0333		114	40-150			

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGG0020 - EPA 5030 Soil MS

Matrix Spike (BGG0020-MS1)

Source: 2306373-01

Prepared & Analyzed: 07/03/23

Acenaphthene	0.0273	0.00500	mg/kg	0.0333	ND	81.9	31-137		
Anthracene	0.0276	0.00500	"	0.0333	ND	82.8	30-120		
Benzo (a) anthracene	0.0329	0.00500	"	0.0333	ND	98.6	30-120		
Benzo (a) pyrene	0.0260	0.00500	"	0.0333	ND	78.1	30-120		
Benzo (b) fluoranthene	0.0371	0.00500	"	0.0333	ND	111	30-120		
Benzo (k) fluoranthene	0.0305	0.00500	"	0.0333	ND	91.5	30-120		
Chrysene	0.0313	0.00500	"	0.0333	ND	93.9	30-120		
Dibenz (a,h) anthracene	0.0291	0.00500	"	0.0333	ND	87.4	30-120		
Fluoranthene	0.0278	0.00500	"	0.0333	ND	83.4	30-120		
Fluorene	0.0272	0.00500	"	0.0333	ND	81.5	30-120		
Indeno (1,2,3-cd) pyrene	0.0263	0.00500	"	0.0333	ND	79.0	30-120		
Pyrene	0.0261	0.00500	"	0.0333	ND	78.3	35-142		
1-Methylnaphthalene	0.0229	0.00500	"	0.0333	ND	68.8	15-130		
2-Methylnaphthalene	0.0280	0.00500	"	0.0333	ND	83.9	15-130		
Surrogate: 2-Methylnaphthalene-d10	0.0219		"	0.0333		65.8	40-150		
Surrogate: Fluoranthene-d10	0.0309		"	0.0333		92.6	40-150		

Matrix Spike Dup (BGG0020-MSD1)

Source: 2306373-01

Prepared & Analyzed: 07/03/23

Acenaphthene	0.0277	0.00500	mg/kg	0.0333	ND	83.0	31-137	1.42	30
Anthracene	0.0283	0.00500	"	0.0333	ND	85.0	30-120	2.61	30
Benzo (a) anthracene	0.0298	0.00500	"	0.0333	ND	89.5	30-120	9.71	30
Benzo (a) pyrene	0.0229	0.00500	"	0.0333	ND	68.6	30-120	12.9	30
Benzo (b) fluoranthene	0.0309	0.00500	"	0.0333	ND	92.8	30-120	18.1	30
Benzo (k) fluoranthene	0.0285	0.00500	"	0.0333	ND	85.6	30-120	6.68	30
Chrysene	0.0292	0.00500	"	0.0333	ND	87.5	30-120	7.10	30
Dibenz (a,h) anthracene	0.0240	0.00500	"	0.0333	ND	72.0	30-120	19.3	30
Fluoranthene	0.0282	0.00500	"	0.0333	ND	84.5	30-120	1.39	30
Fluorene	0.0281	0.00500	"	0.0333	ND	84.3	30-120	3.42	30
Indeno (1,2,3-cd) pyrene	0.0274	0.00500	"	0.0333	ND	82.3	30-120	4.21	30
Pyrene	0.0260	0.00500	"	0.0333	ND	78.0	35-142	0.288	30
1-Methylnaphthalene	0.0294	0.00500	"	0.0333	ND	88.4	15-130	24.9	50
2-Methylnaphthalene	0.0279	0.00500	"	0.0333	ND	83.6	15-130	0.395	50
Surrogate: 2-Methylnaphthalene-d10	0.0304		"	0.0333		91.3	40-150		
Surrogate: Fluoranthene-d10	0.0308		"	0.0333		92.5	40-150		

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

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

Batch BGG0030 - EPA 3050B

Blank (BGG0030-BLK1)

Prepared: 07/03/23 Analyzed: 07/04/23

Boron ND 0.0100 mg/L

LCS (BGG0030-BS1)

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 5.98 0.0100 mg/L 5.00 120 80-120

Duplicate (BGG0030-DUP1)

Source: 2306373-04

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 0.555 0.0100 mg/L 0.547 1.56 20

Matrix Spike (BGG0030-MS1)

Source: 2306373-04

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 6.03 0.0100 mg/L 5.00 0.547 110 75-125

Matrix Spike Dup (BGG0030-MSD1)

Source: 2306373-04

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 6.02 0.0100 mg/L 5.00 0.547 110 75-125 0.0410 25

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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

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

Batch BGG0166 - General Preparation

Blank (BGG0166-BLK1)

Prepared: 07/07/23 Analyzed: 07/11/23

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

LCS (BGG0166-BS1)

Prepared: 07/07/23 Analyzed: 07/11/23

Calcium	5.88	0.0500	mg/L wet	5.00	118	70-130
Magnesium	5.81	0.0500	"	5.00	116	70-130
Sodium	5.97	0.0500	"	5.00	119	70-130

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank

Project Number: UWRWE-A2763-ABN

Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

Summit Scientific

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

Batch BGG0080 - General Preparation

Duplicate (BGG0080-DUP1)

Source: 2306627-01

Prepared & Analyzed: 07/05/23

% Solids	90.9	%	90.7	0.229	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BGG0227 - General Preparation

Blank (BGG0227-BLK1)

Prepared & Analyzed: 07/10/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGG0227-BS1)

Prepared & Analyzed: 07/10/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BGG0227-DUP1)

Source: 2306373-04

Prepared & Analyzed: 07/10/23

Specific Conductance (EC) 0.396 0.0100 mmhos/cm 0.399 0.931 20

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank

Project Number: UWRWE-A2763-ABN

Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

Summit Scientific

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

Batch BGG0225 - General Preparation

LCS (BGG0225-BS1)

Prepared & Analyzed: 07/10/23

pH	9.16	pH Units	9.18	99.8	95-105
----	------	----------	------	------	--------

Duplicate (BGG0225-DUP1)

Source: 2306373-04

Prepared & Analyzed: 07/10/23

pH	8.19	pH Units	8.18	0.122	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank

Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Photo Log



Description:

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Photo Log



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Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

July 12, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

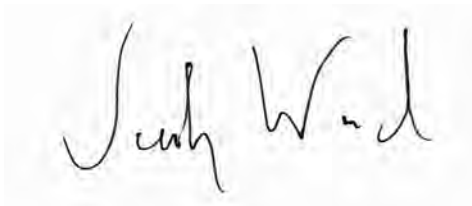
Wellington, CO 80549

RE: Noble - Richter USXAB 27-13 Tank

Work Order #2306627

Enclosed are the results of analyses for samples received by Summit Scientific on 06/29/23 16:42. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Jacob Wood". The signature is written in a cursive, flowing style.

Jacob Wood For Paul Shrewsbury

President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank

Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01 0.5feet	2306627-01	Soil	06/28/23 10:47	06/29/23 16:42
AST02 0.5feet	2306627-02	Soil	06/28/23 10:49	06/29/23 16:42
SEP DL 8feet	2306627-03	Soil	06/28/23 10:51	06/29/23 16:42
PWV02 W 3feet	2306627-04	Soil	06/28/23 12:28	06/29/23 16:42
PWV01 W 3feet	2306627-05	Soil	06/28/23 12:30	06/29/23 16:42

Summit Scientific

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		Send Data To:		Send Invoice To:	
Client: Fremont Environmental		Project Manager: Paul Henehan		Company: Noble	
Address:		E-Mail: Fremont Distribution List		Project Name/Location: Richter WSX AB 27-13 Tank	
City/State/Zip:				AFE#:	
Phone: 303-261-6246		Project Name: Richter WSX AB 27-13 Tank		PO/Billing Codes: UWRWE-A2763-ABN	
Sampler Name: Stanley Gilbert		Project Number:		Contact: Mike Montoya	

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix		Air-Canister #	Other	Analysis Requested								Special Instructions
					HCl	HNO3	None	Other	Water	Soil			BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, Ph, Boron	Metals (915)	TDS, Chloride, Sulfate		HOLD	
1	AST01 0.5 feet	6/28/23	10:47	2			X			X			X	X	X	X					
2	AST02 0.5 feet		10:49																		
3	SEP DL 8 feet		10:51																		
4	PWV02 W 3 feet		12:28																		
5	PWV01 W 3 feet		12:30																		
6																					
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					

Relinquished by:	Date/Time: 6/28/23 16:42	Received by: Summit North	Date/Time: 6/28/23 16:42	TAT Business Days	Field DO	Notes:
Relinquished by: 52	Date/Time: 6/28/23 16:42	Received by:	Date/Time: 6/28/23 16:42	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Standard	<input checked="" type="checkbox"/> Field Turb.	
Temperature Upon Receipt: 8.3	Corrected Temperature: 8	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2306627Client: Fremont Client Project ID: Richter USXAB 27-13 TentShipped Via: H.D./P.U./FedEx/UPS/USPS/Other ☐ Airbill #: ☐
☐ ☒ ☐ ☐ ☐
Matrix (Check all that apply) Air ☐ Soil/Solid ☒ Water ☐ Other ☐Temp (°C) 8.5 Thermometer # 1

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? ⁽¹⁾ NOTE: If samples are delivered the same day of sampling, this requirement is met if there is evidence that cooling has begun.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	on file
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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Are samples preserved that require preservation (excluding cooling)? ⁽¹⁾ Note the type of preservative in the comments column – HCl, H ₂ SO ₄ , NaOH, HNO ₃ , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If dissolved metals are requested, were samples field filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Additional Comments (if any):				
⁽¹⁾ If NO, then contact the client before proceeding with analysis and note in case narrative.				

V. H. Wad

Custodian Printed Name

6/28/23 16:42

Date/Time



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST01 0.5feet
2306627-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0403	101 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0452	113 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0456	114 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.2	81.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST01 0.5feet
2306627-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0203	60.9 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0212	63.7 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.456	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 10:47**

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 - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST01 0.5feet
2306627-01 (Soil)

Summit Scientific

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

Calcium	224	0.0551	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	108	0.0551	"	"	"	"	"	"
Sodium	223	0.0551	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	3.06	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.7		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	4.59	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 10:47**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.95		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

Summit Scientific

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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST02 0.5feet
2306627-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0378	94.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0441	110 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0453	113 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	11.1	89.2 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST02 0.5feet
2306627-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0192	57.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0227	68.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.158	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 10:49**

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 - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

AST02 0.5feet
2306627-02 (Soil)

Summit Scientific

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

Calcium	227	0.0547	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	46.6	0.0547	"	"	"	"	"	"
Sodium	1.12	0.0547	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0177	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	91.4		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.131	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 10:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.28		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

SEP DL 8feet
2306627-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.1 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0446	111 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0450	113 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	10.9	86.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

SEP DL 8feet
2306627-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0244	73.1 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0274	82.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.141	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project Manager: Paul Henchan

Reported:
07/12/23 08:53

SEP DL 8feet
2306627-03 (Soil)

Summit Scientific

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

Calcium	16.5	0.0568	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	3.82	0.0568	"	"	"	"	"	"
Sodium	5.65	0.0568	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.326	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	88.0		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.286	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 10:51**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.19		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV02 W 3feet
2306627-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	ND	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0375	93.8 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0446	112 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0454	114 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGF1134	06/30/23	06/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	6.86	54.9 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV02 W 3feet
2306627-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/03/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	ND	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	ND	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0198	59.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0200	60.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.118	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 12:28**

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

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV02 W 3feet
2306627-04 (Soil)

Summit Scientific

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

Calcium	57.7	0.0581	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	19.8	0.0581	"	"	"	"	"	"
Sodium	47.1	0.0581	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.36	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.18	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 12:28**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.86		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

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Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PWV01 W 3feet
2306627-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGF1129	06/30/23	07/02/23	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.010	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.0050	"	"	"	"	"	"	
Naphthalene	0.011	0.0038	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0438	110 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0449	112 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	63	50	mg/kg	1	BGF1134	06/30/23	07/01/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	12.9	103 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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07/12/23 08:53

PWV01 W 3feet
2306627-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0020	07/03/23	07/04/23	EPA 8270D SIM	
Anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) anthracene	ND	0.00500	"	"	"	"	"	"	
Benzo (a) pyrene	ND	0.00500	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	0.00500	"	"	"	"	"	"	
Chrysene	ND	0.00500	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	0.00500	"	"	"	"	"	"	
Fluoranthene	ND	0.00500	"	"	"	"	"	"	
Fluorene	0.0172	0.00500	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	0.00500	"	"	"	"	"	"	
Pyrene	ND	0.00500	"	"	"	"	"	"	
1-Methylnaphthalene	0.0633	0.00500	"	"	"	"	"	"	
2-Methylnaphthalene	0.0691	0.00500	"	"	"	"	"	"	

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0219	65.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0181	54.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0985	0.0100	mg/L	1	BGG0030	07/03/23	07/04/23	EPA 6020B	

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

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

**PWV01 W 3feet
2306627-05 (Soil)**

Summit Scientific

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

Calcium	1.02	0.0556	mg/L dry	1	BGG0166	07/07/23	07/11/23	EPA 6020B
Magnesium	0.422	0.0556	"	"	"	"	"	"
Sodium	22.3	0.0556	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	4.69	0.00100	units	1	BGG0293	07/11/23	07/11/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.9		%	1	BGG0080	07/05/23	07/05/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.565	0.0100	mmhos/cm	1	BGG0227	07/10/23	07/10/23	EPA 120.1	

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

Date Sampled: **06/28/23 12:30**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.80		pH Units	1	BGG0225	07/10/23	07/10/23	EPA 9045D	

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Project Number: UWRWE-A2763-ABN
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Reported:
07/12/23 08:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGF1129 - EPA 5030 Soil MS

Blank (BGF1129-BLK1)

Prepared: 06/30/23 Analyzed: 07/01/23

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.010	"							
1,2,4-Trimethylbenzene	ND	0.0050	"							
1,3,5-Trimethylbenzene	ND	0.0050	"							
Naphthalene	ND	0.0038	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
Surrogate: 1,2-Dichloroethane-d4	0.0387		"	0.0400		96.7	50-150			
Surrogate: Toluene-d8	0.0445		"	0.0400		111	50-150			
Surrogate: 4-Bromofluorobenzene	0.0460		"	0.0400		115	50-150			

LCS (BGF1129-BS1)

Prepared: 06/30/23 Analyzed: 07/01/23

Benzene	0.112	0.0020	mg/kg	0.125		89.4	70-130			
Toluene	0.154	0.0050	"	0.125		123	70-130			
Ethylbenzene	0.150	0.0050	"	0.125		120	70-130			
m,p-Xylene	0.304	0.010	"	0.250		122	70-130			
o-Xylene	0.142	0.0050	"	0.125		114	70-130			
1,2,4-Trimethylbenzene	0.151	0.0050	"	0.125		121	70-130			
1,3,5-Trimethylbenzene	0.152	0.0050	"	0.125		122	70-130			
Naphthalene	0.129	0.0038	"	0.125		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0406		"	0.0400		101	50-150			
Surrogate: Toluene-d8	0.0442		"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene	0.0437		"	0.0400		109	50-150			

Matrix Spike (BGF1129-MS1)

Source: 2306373-01

Prepared: 06/30/23 Analyzed: 07/01/23

Benzene	0.112	0.0020	mg/kg	0.125	ND	89.9	70-130			
Toluene	0.155	0.0050	"	0.125	ND	124	70-130			
Ethylbenzene	0.154	0.0050	"	0.125	ND	123	70-130			
m,p-Xylene	0.313	0.010	"	0.250	ND	125	70-130			
o-Xylene	0.150	0.0050	"	0.125	ND	120	70-130			
1,2,4-Trimethylbenzene	0.155	0.0050	"	0.125	ND	124	70-130			
1,3,5-Trimethylbenzene	0.153	0.0050	"	0.125	ND	123	70-130			
Naphthalene	0.144	0.0038	"	0.125	ND	115	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0394		"	0.0400		98.4	50-150			
Surrogate: Toluene-d8	0.0436		"	0.0400		109	50-150			
Surrogate: 4-Bromofluorobenzene	0.0442		"	0.0400		110	50-150			

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

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

Batch BGF1129 - EPA 5030 Soil MS

Matrix Spike Dup (BGF1129-MSD1)		Source: 2306373-01			Prepared: 06/30/23 Analyzed: 07/01/23					
Benzene	0.109	0.0020	mg/kg	0.125	ND	87.5	70-130	2.76	30	
Toluene	0.153	0.0050	"	0.125	ND	122	70-130	1.36	30	
Ethylbenzene	0.147	0.0050	"	0.125	ND	118	70-130	4.29	30	
m,p-Xylene	0.300	0.010	"	0.250	ND	120	70-130	4.12	30	
o-Xylene	0.140	0.0050	"	0.125	ND	112	70-130	6.89	30	
1,2,4-Trimethylbenzene	0.156	0.0050	"	0.125	ND	124	70-130	0.503	30	
1,3,5-Trimethylbenzene	0.151	0.0050	"	0.125	ND	121	70-130	1.30	30	
Naphthalene	0.138	0.0038	"	0.125	ND	110	70-130	4.66	30	
Surrogate: 1,2-Dichloroethane-d4		0.0398	"	0.0400		99.4	50-150			
Surrogate: Toluene-d8		0.0441	"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene		0.0436	"	0.0400		109	50-150			

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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGF1134 - EPA 3550A

Blank (BGF1134-BLK1)

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	10.2		"	12.5		81.8	30-150			

LCS (BGF1134-BS1)

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	363	50	mg/kg	500		72.6	70-130			
Surrogate: o-Terphenyl	12.3		"	12.5		98.2	30-150			

Matrix Spike (BGF1134-MS1)

Source: 2306373-01

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	393	50	mg/kg	500	37.3	71.1	70-130			
Surrogate: o-Terphenyl	11.9		"	12.5		95.2	30-150			

Matrix Spike Dup (BGF1134-MSD1)

Source: 2306373-01

Prepared & Analyzed: 06/30/23

C10-C28 (DRO)	406	50	mg/kg	500	37.3	73.7	70-130	3.20	20	
Surrogate: o-Terphenyl	12.4		"	12.5		99.5	30-150			

Summit Scientific

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PO Box 1289
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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGG0020 - EPA 5030 Soil MS

Blank (BGG0020-BLK1)

Prepared & Analyzed: 07/03/23

Acenaphthene	ND	0.00500	mg/kg							
Anthracene	ND	0.00500	"							
Benzo (a) anthracene	ND	0.00500	"							
Benzo (a) pyrene	ND	0.00500	"							
Benzo (b) fluoranthene	ND	0.00500	"							
Benzo (k) fluoranthene	ND	0.00500	"							
Chrysene	ND	0.00500	"							
Dibenz (a,h) anthracene	ND	0.00500	"							
Fluoranthene	ND	0.00500	"							
Fluorene	ND	0.00500	"							
Indeno (1,2,3-cd) pyrene	ND	0.00500	"							
Pyrene	ND	0.00500	"							
1-Methylnaphthalene	ND	0.00500	"							
2-Methylnaphthalene	ND	0.00500	"							
Surrogate: 2-Methylnaphthalene-d10	0.0393		"	0.0333		118	40-150			
Surrogate: Fluoranthene-d10	0.0323		"	0.0333		96.8	40-150			

LCS (BGG0020-BS1)

Prepared & Analyzed: 07/03/23

Acenaphthene	0.0364	0.00500	mg/kg	0.0333		109	31-137			
Anthracene	0.0350	0.00500	"	0.0333		105	30-120			
Benzo (a) anthracene	0.0390	0.00500	"	0.0333		117	30-120			
Benzo (a) pyrene	0.0345	0.00500	"	0.0333		103	30-120			
Benzo (b) fluoranthene	0.0376	0.00500	"	0.0333		113	30-120			
Benzo (k) fluoranthene	0.0398	0.00500	"	0.0333		119	30-120			
Chrysene	0.0393	0.00500	"	0.0333		118	30-120			
Dibenz (a,h) anthracene	0.0356	0.00500	"	0.0333		107	30-120			
Fluoranthene	0.0317	0.00500	"	0.0333		95.2	30-120			
Fluorene	0.0366	0.00500	"	0.0333		110	30-120			
Indeno (1,2,3-cd) pyrene	0.0389	0.00500	"	0.0333		117	30-120			
Pyrene	0.0366	0.00500	"	0.0333		110	35-142			
1-Methylnaphthalene	0.0371	0.00500	"	0.0333		111	35-142			
2-Methylnaphthalene	0.0398	0.00500	"	0.0333		119	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0364		"	0.0333		109	40-150			
Surrogate: Fluoranthene-d10	0.0381		"	0.0333		114	40-150			

Summit Scientific

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Fremont Environmental
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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGG0020 - EPA 5030 Soil MS

Matrix Spike (BGG0020-MS1)

Source: 2306373-01

Prepared & Analyzed: 07/03/23

Acenaphthene	0.0273	0.00500	mg/kg	0.0333	ND	81.9	31-137				
Anthracene	0.0276	0.00500	"	0.0333	ND	82.8	30-120				
Benzo (a) anthracene	0.0329	0.00500	"	0.0333	ND	98.6	30-120				
Benzo (a) pyrene	0.0260	0.00500	"	0.0333	ND	78.1	30-120				
Benzo (b) fluoranthene	0.0371	0.00500	"	0.0333	ND	111	30-120				
Benzo (k) fluoranthene	0.0305	0.00500	"	0.0333	ND	91.5	30-120				
Chrysene	0.0313	0.00500	"	0.0333	ND	93.9	30-120				
Dibenz (a,h) anthracene	0.0291	0.00500	"	0.0333	ND	87.4	30-120				
Fluoranthene	0.0278	0.00500	"	0.0333	ND	83.4	30-120				
Fluorene	0.0272	0.00500	"	0.0333	ND	81.5	30-120				
Indeno (1,2,3-cd) pyrene	0.0263	0.00500	"	0.0333	ND	79.0	30-120				
Pyrene	0.0261	0.00500	"	0.0333	ND	78.3	35-142				
1-Methylnaphthalene	0.0229	0.00500	"	0.0333	ND	68.8	15-130				
2-Methylnaphthalene	0.0280	0.00500	"	0.0333	ND	83.9	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0219		"	0.0333		65.8	40-150				
Surrogate: Fluoranthene-d10	0.0309		"	0.0333		92.6	40-150				

Matrix Spike Dup (BGG0020-MSD1)

Source: 2306373-01

Prepared & Analyzed: 07/03/23

Acenaphthene	0.0277	0.00500	mg/kg	0.0333	ND	83.0	31-137	1.42	30		
Anthracene	0.0283	0.00500	"	0.0333	ND	85.0	30-120	2.61	30		
Benzo (a) anthracene	0.0298	0.00500	"	0.0333	ND	89.5	30-120	9.71	30		
Benzo (a) pyrene	0.0229	0.00500	"	0.0333	ND	68.6	30-120	12.9	30		
Benzo (b) fluoranthene	0.0309	0.00500	"	0.0333	ND	92.8	30-120	18.1	30		
Benzo (k) fluoranthene	0.0285	0.00500	"	0.0333	ND	85.6	30-120	6.68	30		
Chrysene	0.0292	0.00500	"	0.0333	ND	87.5	30-120	7.10	30		
Dibenz (a,h) anthracene	0.0240	0.00500	"	0.0333	ND	72.0	30-120	19.3	30		
Fluoranthene	0.0282	0.00500	"	0.0333	ND	84.5	30-120	1.39	30		
Fluorene	0.0281	0.00500	"	0.0333	ND	84.3	30-120	3.42	30		
Indeno (1,2,3-cd) pyrene	0.0274	0.00500	"	0.0333	ND	82.3	30-120	4.21	30		
Pyrene	0.0260	0.00500	"	0.0333	ND	78.0	35-142	0.288	30		
1-Methylnaphthalene	0.0294	0.00500	"	0.0333	ND	88.4	15-130	24.9	50		
2-Methylnaphthalene	0.0279	0.00500	"	0.0333	ND	83.6	15-130	0.395	50		
Surrogate: 2-Methylnaphthalene-d10	0.0304		"	0.0333		91.3	40-150				
Surrogate: Fluoranthene-d10	0.0308		"	0.0333		92.5	40-150				

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

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

Batch BGG0030 - EPA 3050B

Blank (BGG0030-BLK1)

Prepared: 07/03/23 Analyzed: 07/04/23

Boron ND 0.0100 mg/L

LCS (BGG0030-BS1)

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 5.98 0.0100 mg/L 5.00 120 80-120

Duplicate (BGG0030-DUP1)

Source: 2306373-04

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 0.555 0.0100 mg/L 0.547 1.56 20

Matrix Spike (BGG0030-MS1)

Source: 2306373-04

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 6.03 0.0100 mg/L 5.00 0.547 110 75-125

Matrix Spike Dup (BGG0030-MSD1)

Source: 2306373-04

Prepared: 07/03/23 Analyzed: 07/04/23

Boron 6.02 0.0100 mg/L 5.00 0.547 110 75-125 0.0410 25

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Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

Summit Scientific

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

Batch BGG0166 - General Preparation

Blank (BGG0166-BLK1)

Prepared: 07/07/23 Analyzed: 07/11/23

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

LCS (BGG0166-BS1)

Prepared: 07/07/23 Analyzed: 07/11/23

Calcium	5.88	0.0500	mg/L wet	5.00	118	70-130
Magnesium	5.81	0.0500	"	5.00	116	70-130
Sodium	5.97	0.0500	"	5.00	119	70-130

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Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

Summit Scientific

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

Batch BGG0080 - General Preparation

Duplicate (BGG0080-DUP1)

Source: 2306627-01

Prepared & Analyzed: 07/05/23

% Solids	90.9	%	90.7	0.229	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank
Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction - Quality Control
Summit Scientific

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

Batch BGG0227 - General Preparation

Blank (BGG0227-BLK1)

Prepared & Analyzed: 07/10/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGG0227-BS1)

Prepared & Analyzed: 07/10/23

Specific Conductance (EC) 0.152 0.0100 mmhos/cm 0.150 102 95-105

Duplicate (BGG0227-DUP1)

Source: 2306373-04

Prepared & Analyzed: 07/10/23

Specific Conductance (EC) 0.396 0.0100 mmhos/cm 0.399 0.931 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank

Project Number: UWRWE-A2763-ABN

Project Manager: Paul Henchan

Reported:
07/12/23 08:53

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

Summit Scientific

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

Batch BGG0225 - General Preparation

LCS (BGG0225-BS1)

Prepared & Analyzed: 07/10/23

pH	9.16	pH Units	9.18	99.8	95-105
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Duplicate (BGG0225-DUP1)

Source: 2306373-04

Prepared & Analyzed: 07/10/23

pH	8.19	pH Units	8.18	0.122	20
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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Richter USXAB 27-13 Tank

Project Number: UWRWE-A2763-ABN
Project Manager: Paul Henchan

Reported:
07/12/23 08:53

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference