

FREMONT ENVIRONMENTAL INC.

March 26, 2024

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

Subject: **Facility Closure Data Submittal**
Orr USX A03-15D Tank
SESE Sec. 3, T6N, R64W
Weld County, Colorado
Fremont Project No. C023-193
Facility # 424439, Remediation # 28924

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted facility closure activities for the Noble Energy Inc. (Noble) Orr USX A03-15D Tank. Impacted soil was not encountered during abandonment activities. Details of the Orr USX A03-15D Tank facility closure activities are documented in the attached Closure Report. Groundwater was not encountered during flowline abandonment activities.

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

Sincerely,

FREMONT ENVIRONMENTAL INC.



Stanley Gilbert
Environmental Scientist

Attachments:

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

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
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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/DRV, 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								

<i>Third Party Removal Date</i>									
<i>Sample taken? Location/ Sample</i>									
<i>PID Readings</i>									
<i>Photo Number(s)</i>									

Other Facility Equipment

<i>Equipment type</i>					
<i>Equipment Condition Age</i>					
<i>Soil impacts</i>					
<i>PID Readings</i>					
<i>Sample taken? Location/ Sample</i>					
<i>Photo Number(s)</i>					

Other observations regarding other facility or third party equipment:

Summary

<i>Was impacted soil identified?</i>	
No	Yes - less than 10 cubic yards
Yes - more than 10 cubic yards	
<i>Total number of samples field screened:</i>	<i>Total number of samples collected:</i>
<i>Highest PID Reading:</i>	<i>Total number of samples submitted to lab for analysis:</i>
<i>If more than 10 cubic yards of impacted soil were observed:</i>	
<i>Vertical extent:</i>	<i>Estimated spill volume:</i>
<i>Lateral extent:</i>	<i>Volume of soil removed:</i>
<i>Is additional investigation required?</i>	
<i>Was groundwater encountered during the investigation?</i>	
No	Yes - not impacted or in contact with impacted soils
Yes - groundwater impacted and/or in contact with impacted soils	
<i>Measured depth to groundwater:</i>	<i>Was remedial groundwater removal conducted? Yes No</i>
<i>Date Groundwater was encountered:</i>	<i>Commencement date of removal:</i>
<i>Sheen on groundwater? Yes No</i>	<i>Volume of groundwater removed prior to sampling:</i>
<i>Free product observed? Yes No</i>	<i>Volume of groundwater removed post sampling:</i>
<i>Total number of samples collected:</i>	<i>Total Volume of groundwater removed:</i>
<i>Total number of samples submitted to lab for analysis:</i>	

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 Dumpline									
PID Readings									
Sample taken? Location/Sample ID#									
Photo Number(s)									
Other observations regarding partially buried vessels: The Northern 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.
ORR USX A03-15D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-193

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 0.5 feet	07/18/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST02 0.5 feet	07/18/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST03 0.5 feet	07/18/2023	0.5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV01 FLOOR 5 feet	07/18/2023	5'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV02 N 3 feet	07/18/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP01 DL 3 feet	07/18/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP02 DL 3 feet	07/18/2023	3'	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50

Bold faced values exceed the ECMC Table 915-1 concentrations

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

* 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.
ORR USX A03-15D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-193

Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			360	1800	1.1	0.11	1.1	11	110	0.11	240	240	1.1	180	18	24
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST01 0.5 feet	07/18/2023	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 0.5 feet	07/18/2023	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
AST03 0.5 feet	07/18/2023	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 FLOOR 5 feet	07/18/2023	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
PWV02 N 3 feet	07/18/2023	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
SEP01 DL 3 feet	07/18/2023	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
SEP02 DL 3 feet	07/18/2023	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

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.
ORR USX A03-15D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-193

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
COGCC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01 0.5 feet	07/18/2023	0.5'	8.22	0.0663	0.548	0.0644
AST02 0.5 feet	07/18/2023	0.5'	8.73	0.100	0.696	0.0466
AST03 0.5 feet	07/18/2023	0.5'	8.41	0.0945	0.964	0.0276
PWV01 FLOOR 5 feet	07/18/2023	5'	8.15	0.509	1.81	0.526
PWV02 N 3 feet	07/18/2023	3'	7.63	0.516	0.676	1.41
SEP01 DL 3 feet	07/18/2023	3'	7.92	0.308	0.417	0.433
SEP02 DL 3 feet	07/18/2023	3'	7.76	0.308	0.117	0.326

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

TABLE 4
SUMMARY OF METALS IN SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
ORR USX A03-15D TANK, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-193

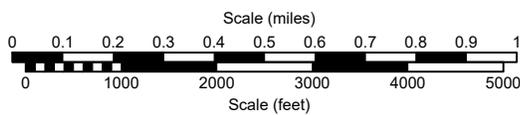
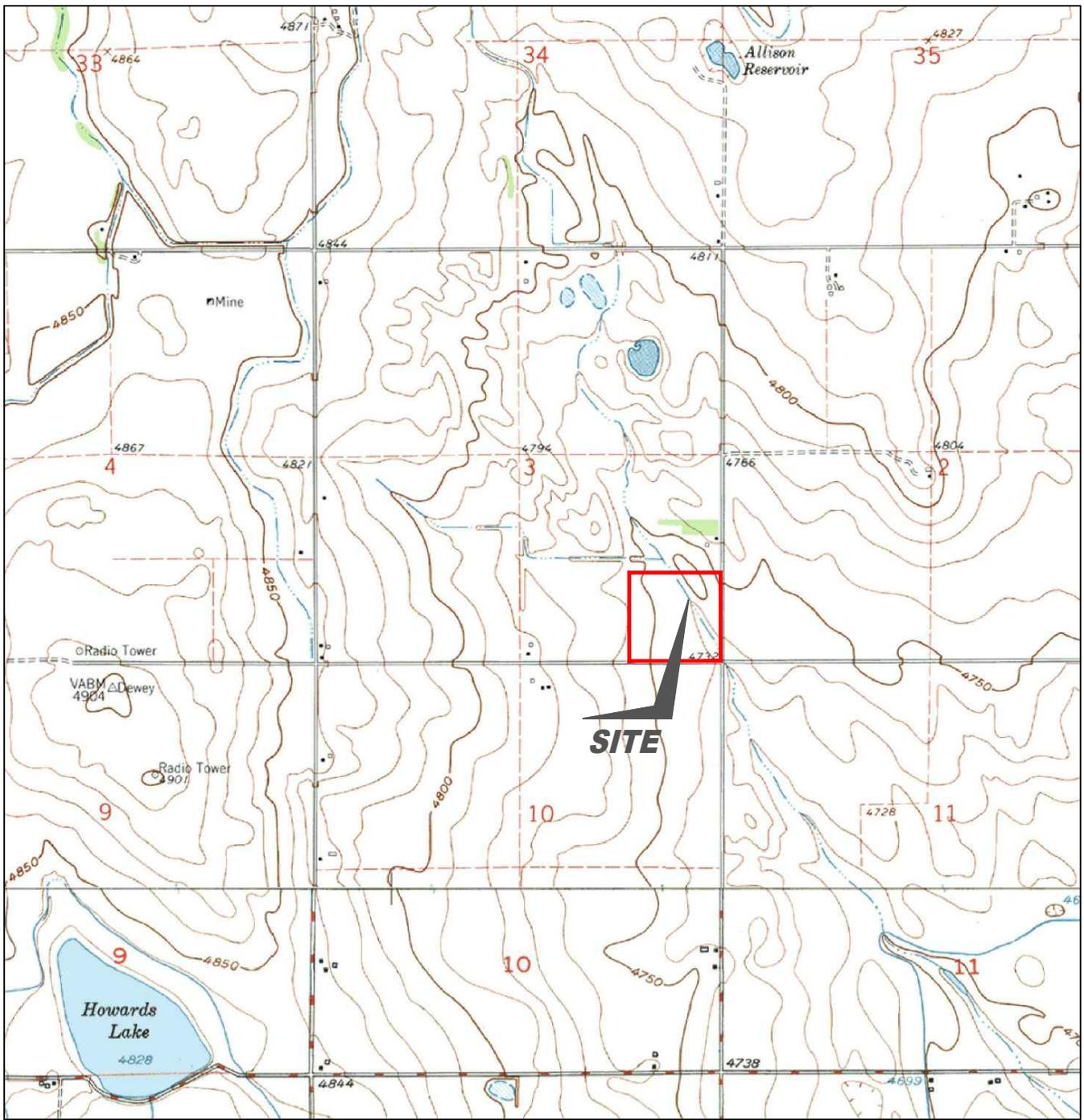
Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
ECMC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
ECMC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
AST01 0.5 feet	07/18/2023	0.5'	2.11	6.95	<0.200	<0.30	2.68	2.84	1.64	<0.265	<0.0200	4.96
AST02 0.5 feet	07/18/2023	0.5'	0.824	3.31	<0.200	<0.30	1.42	0.814	1.51	<0.261	<0.0200	3.56
AST03 0.5 feet	07/18/2023	0.5'	1.28	6.84	0.282	<0.30	1.04	1.66	0.577	<0.262	<0.0200	2.30
PWV01 FLOOR 5 feet	07/18/2023	5'	1.72	55.3	<0.200	<0.30	4.21	4.64	3.80	0.224	0.0215	15.8
PWV02 N 3 feet	07/18/2023	3'	2.23	59.9	0.276	<0.30	5.60	6.66	4.48	0.328	0.0302	20.00
SEP01 DL 3 feet	07/18/2023	3'	1.44	31.8	<0.200	<0.30	3.32	3.62	2.61	<0.288	<0.0200	10.8
SEP02 DL 3 feet	07/18/2023	3'	1.84	33.5	<0.200	<0.30	3.62	4.76	2.95	0.235	<0.0200	12.2

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



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

Noble Energy, Inc. ~ Orr USX A03-15D Tank
SESE Sec. 3, T6N, R64W, 6th PM
Weld County, Colorado
40.511385°, -104.530303°

Project # CO23-193	API #	Facility # 424439
Date 3/8/24	Remediation # 28924	Filename 23193T





LEGEND

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

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

**Figure 2
SITE MAP**

Noble Energy, Inc. ~ Orr USX A03-15D Tank
 SESE Sec. 3, T6N, R64W, 6th PM
 Weld County, Colorado
 40.511385°, -104.530303°

Project # CO23-193	API #	Facility # 424439
Date 3/26/24	Remediation # 28924	Filename 23193Q





LEGEND

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

DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)	DATE SAMPLED	SAMPLE ID and DEPTH (ft)
4/7/2023	FL01 (ft)	4/7/2023	FL01 (ft)	4/7/2023	FL01 (ft)
ACE	<0.0050	ACE	<0.0050	ACE	<0.0050
Ant	<0.0050	Ant	<0.0050	Ant	<0.0050
BaA	<0.0050	BaA	<0.0050	BaA	<0.0050
BaP	<0.0050	BaP	<0.0050	BaP	<0.0050
Chr	<0.0050	Chr	<0.0050	Chr	<0.0050
DBaHant	<0.0050	DBaHant	<0.0050	DBaHant	<0.0050
FLU	<0.0050	FLU	<0.0050	FLU	<0.0050
1123aDPY	<0.0050	1123aDPY	<0.0050	1123aDPY	<0.0050
1MN	<0.0050	1MN	<0.0050	1MN	<0.0050
2MN	<0.0050	2MN	<0.0050	2MN	<0.0050
PY	<0.0050	PY	<0.0050	PY	<0.0050

Figure 3
SOIL CHEMISTRY MAP

Noble Energy, Inc. ~ Orr USX A03-15D Tank
SESE Sec. 3, T6N, R64W, 6th PM
Weld County, Colorado
40.511385°, -104.530303°

Project #	API #	Facility #
CO23-193		424439
Date	Remediation #	Filename
3/26/24	28924	23193Q



LEGEND

- WELLHEAD LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FORMER FACILITY
- FLOW LINE
- ||||| CONTAINMENT BERM
- FENCE LINE
- ★ PROPOSED BACKGROUND SOIL SAMPLE (x5)

Figure 4

PROPOSED BACKGROUND SOIL SAMPLE MAP

Noble Energy, Inc. ~ Orr USX A03-15D Tank
 SESE Sec. 3, T6N, R64W, 6th PM
 Weld County, Colorado
 40.511385°, -104.530303°

Project # CO23-193	API #	Facility # 424439
Date 3/8/24	Remediation # 28924	Filename 23193Q



Photo Log



Description:

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Photo Log



Description:

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Photo Log



Description:

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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

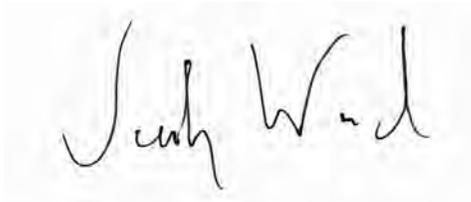
August 17, 2023

Paul Henchan
Fremont Environmental
PO Box 1289
Wellington, CO 80549

RE: Noble - Orr USX A03-15D Tank
Work Order #2307352

Enclosed are the results of analyses for samples received by Summit Scientific on 07/19/23 15:46. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

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

Jacob Wood For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN

Project Manager: Paul Henchan

Reported:
08/17/23 16:12

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01 0.5 feet	2307352-01	Soil	07/18/23 13:11	07/19/23 15:46
AST02 0.5 feet	2307352-02	Soil	07/18/23 13:17	07/19/23 15:46
AST03 0.5 feet	2307352-03	Soil	07/18/23 13:19	07/19/23 15:46
PWV01 FLOOR 5 feet	2307352-04	Soil	07/18/23 15:14	07/19/23 15:46
PWV02 N 3 feet	2307352-05	Soil	07/18/23 15:10	07/19/23 15:46
SEP01 DL 3 feet	2307352-06	Soil	07/18/23 13:49	07/19/23 15:46
SEP02 DL 3 feet	2307352-07	Soil	07/18/23 13:42	07/19/23 15:46

Summit Scientific

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



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

Lab ID	Page 1 of 1
2307352	

Send Data To:		Send Invoice To:	
Client: Fremont Environmental	Project Manager: Paul Henehan	Company: Noble	
Address:	E-Mail: Fremont Distribution List	Project Name/Location: ORR USX A03-15D Tank	
City/State/Zip:		AFE#:	
Phone: 303-261-6246	Project Name: ORR USX A03-15D Tank	PO/Billing Codes: UWRWE-A2568-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	
1	AST01 0.5 feet	7/18/23	13:11	2			X			X			X	X	X	X			
2	AST02 0.5 feet		13:17																
3	AST03 0.5 feet		13:19																
4	PW01 FLOOR 5 feet		15:14																
5	PW02 N 3 feet		15:10																
6	SEPO1 DL 3 feet		13:49																
7	SEPO2 DL 3 feet		13:42																
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

Relinquished by:	Date/Time: 7/19/23 15:46	Received by: Summit North	Date/Time: 7/19/23 15:46	TAT Business Days	Field DO	Notes:
Relinquished by: S2	Date/Time: 7/19/23 15:46	Received by:	Date/Time: 7/19/23 15:46	Same Day	Field EC	
				1 Day	Field ORP	
				2 Days	Field pH	
				3 Days	Field Temp.	
				Standard	Field Turb.	
Temperature Upon Receipt: 14.1	Corrected Temperature:	IR gun #: 1	HNO3 lot #:			

S₂

Sample Receipt Checklist

S2 Work Order# 2307352

Client: Evermont Client Project ID: ORR USX A03-150 Tank Data Hay

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

Matrix (Check all that apply) Air Soil/Solid Water Other

Temp (°C) 14.1 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.	-			On-ZEE
If custody seals are present, are they intact? ⁽¹⁾	-			
Are samples due within 48 hours present?		-		
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		-		
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	-			
Is the COC properly relinquished by the client w/ date and time recorded? ⁽¹⁾	-			
Were all samples received intact? ⁽¹⁾	✓			
Was adequate sample volume provided? ⁽¹⁾	✓			
Does the COC agree with the number and type of sample bottles received? ⁽¹⁾	✓			
Do the sample IDs on the bottle labels match the COC? ⁽¹⁾	✓			
For volatiles in water – is there headspace present? If yes, contact client and note in narrative.			✓	
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.			✓	
If samples are acid preserved for metals, is the pH ≤ 2? ⁽¹⁾ Record the pH in Comments.			✓	
If dissolved metals are requested, were samples field filtered?			✓	
Additional Comments (if any):				

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

AS 7/19/23
Custodian Printed Name Date/Time

23



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

AST01 0.5 feet
2307352-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0610	07/20/23	07/22/23	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: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0614	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.4	91.0 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

AST01 0.5 feet
2307352-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0644	07/20/23	07/21/23	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: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0227	68.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0228	68.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0644	0.0100	mg/L	1	BGG0641	07/20/23	07/27/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/23 13:11**

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 - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

**AST01 0.5 feet
2307352-01 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	2.11	0.200	mg/kg dry	1	BGG0602	07/20/23	07/27/23	EPA 6020B	
Barium	6.95	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	2.68	0.400	"	"	"	"	"	"	
Lead	2.84	0.200	"	"	"	"	"	"	
Nickel	1.64	0.400	"	"	"	"	"	"	
Selenium	ND	0.265	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	4.96	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGG0748	07/24/23	07/24/23	EPA 7196A	

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

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4.81	0.0510	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	3.21	0.0510	"	"	"	"	"	"	
Sodium	6.33	0.0510	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.548	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

**AST01 0.5 feet
2307352-01 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	98.1		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/23 13:11**

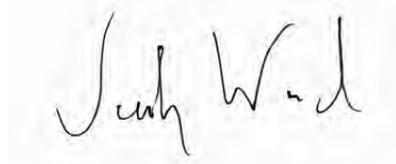
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.0663	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/18/23 13:11**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.22		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

AST02 0.5 feet
2307352-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0610	07/20/23	07/22/23	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: **07/18/23 13:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0394	98.4 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0411	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0436	109 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0614	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.6	92.8 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

AST02 0.5 feet
2307352-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0644	07/20/23	07/21/23	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: **07/18/23 13:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0219	65.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0210	62.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0466	0.0100	mg/L	1	BGG0641	07/20/23	07/27/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/23 13:17**

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 - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

AST02 0.5 feet
2307352-02 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	0.824	0.200	mg/kg dry	1	BGG0602	07/20/23	07/27/23	EPA 6020B	
Barium	3.31	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	1.42	0.400	"	"	"	"	"	"	
Lead	0.814	0.200	"	"	"	"	"	"	
Nickel	1.51	0.400	"	"	"	"	"	"	
Selenium	ND	0.261	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	3.56	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: 07/18/23 13:17

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGG0748	07/24/23	07/24/23	EPA 7196A	

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

Date Sampled: 07/18/23 13:17

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	5.96	0.0503	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	2.82	0.0503	"	"	"	"	"	"	
Sodium	8.23	0.0503	"	"	"	"	"	"	

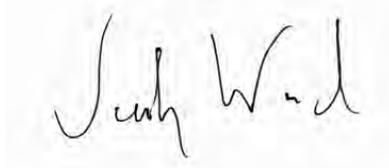
Calculated Analysis

Date Sampled: 07/18/23 13:17

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.696	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific



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 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

AST02 0.5 feet
2307352-02 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	99.5			%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.100	0.0100		mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

Summit Scientific

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 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

AST02 0.5 feet
2307352-02 (Soil)

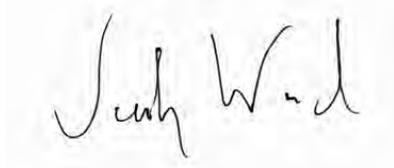
Summit Scientific

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

Date Sampled: **07/18/23 13:17**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.73		pH Units	1	BGH0106	07/21/23	08/02/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

AST03 0.5 feet
2307352-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGG0610	07/20/23	07/22/23	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: **07/18/23 13:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0392	98.0 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0401	100 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0422	106 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0614	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/23 13:19**

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

PAH by EPA Method 8270D SIM

Summit Scientific

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Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

AST03 0.5 feet
2307352-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0644	07/20/23	07/21/23	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: **07/18/23 13:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0218	65.5 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0215	64.6 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0276	0.0100	mg/L	1	BGG0641	07/20/23	07/27/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Summit Scientific

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



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

**AST03 0.5 feet
2307352-03 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.28	0.200	mg/kg dry	1	BGG0602	07/20/23	07/27/23	EPA 6020B	
Barium	6.84	0.400	"	"	"	"	"	"	
Cadmium	0.282	0.200	"	"	"	"	"	"	
Copper	1.04	0.400	"	"	"	"	"	"	
Lead	1.66	0.200	"	"	"	"	"	"	
Nickel	0.577	0.400	"	"	"	"	"	"	
Selenium	ND	0.262	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	2.30	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGG0748	07/24/23	07/24/23	EPA 7196A	

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

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	4.79	0.0504	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	2.24	0.0504	"	"	"	"	"	"	
Sodium	10.2	0.0504	"	"	"	"	"	"	

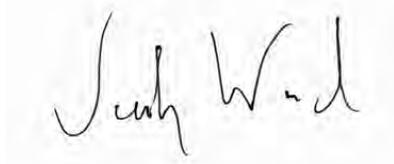
Calculated Analysis

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.964	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific



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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

AST03 0.5 feet
2307352-03 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 13:19**

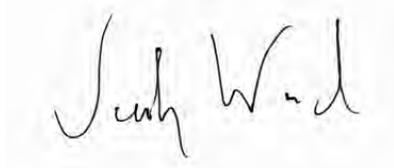
Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
% Solids	99.2			%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
Specific Conductance (EC)	0.0945	0.0100		mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

AST03 0.5 feet
2307352-03 (Soil)

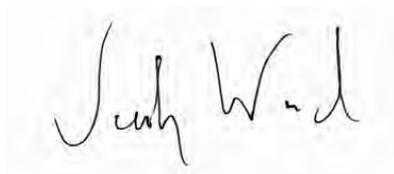
Summit Scientific

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

Date Sampled: **07/18/23 13:19**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
pH	8.41		pH Units	1	BGH0106	07/21/23	08/02/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

PWV01 FLOOR 5 feet
2307352-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0610	07/20/23	07/22/23	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: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0392	97.9 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0406	101 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0432	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0614	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.3	90.3 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

**PWV01 FLOOR 5 feet
2307352-04 (Soil)**

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0644	07/20/23	07/21/23	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: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0167	50.0 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0193	58.0 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.526	0.0100	mg/L	1	BGG0641	07/20/23	07/27/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/23 15:14**

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 - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

**PWV01 FLOOR 5 feet
2307352-04 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.72	0.200	mg/kg dry	1	BGG0602	07/20/23	07/27/23	EPA 6020B
Barium	55.3	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	4.21	0.400	"	"	"	"	"	"
Lead	4.64	0.200	"	"	"	"	"	"
Nickel	3.80	0.400	"	"	"	"	"	"
Selenium	0.224	0.318	"	"	"	"	"	"
Silver	0.0215	0.0200	"	"	"	"	"	"
Zinc	15.8	0.400	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGG0748	07/24/23	07/24/23	EPA 7196A	

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

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	41.9	0.0611	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	23.8	0.0611	"	"	"	"	"	"	
Sodium	59.3	0.0611	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.81	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 15:14**

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 - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

**PWV01 FLOOR 5 feet
 2307352-04 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	81.8	%	1	BGG0629	07/20/23	07/21/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.509	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/18/23 15:14**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.15		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

**PWV02 N 3 feet
2307352-05 (Soil)**

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0610	07/20/23	07/23/23	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: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0409	102 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0431	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0614	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	11.3	90.6 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

PWV02 N 3 feet
2307352-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0644	07/20/23	07/21/23	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: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0159	47.8 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0137	41.2 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	1.41	0.0100	mg/L	1	BGG0641	07/20/23	07/27/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/23 15:10**

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 - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

**PWV02 N 3 feet
2307352-05 (Soil)**

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	2.23	0.200	mg/kg dry	1	BGG0602	07/20/23	07/27/23	EPA 6020B
Barium	59.9	0.400	"	"	"	"	"	"
Cadmium	0.276	0.200	"	"	"	"	"	"
Copper	5.60	0.400	"	"	"	"	"	"
Lead	6.66	0.200	"	"	"	"	"	"
Nickel	4.48	0.400	"	"	"	"	"	"
Selenium	0.328	0.307	"	"	"	"	"	"
Silver	0.0302	0.0200	"	"	"	"	"	"
Zinc	20.0	0.400	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: 07/18/23 15:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGG0748	07/24/23	07/24/23	EPA 7196A	

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

Date Sampled: 07/18/23 15:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	28.0	0.0590	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	24.5	0.0590	"	"	"	"	"	"	
Sodium	20.3	0.0590	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: 07/18/23 15:10

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.676	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 07/18/23 15:10

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 - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

**PWV02 N 3 feet
 2307352-05 (Soil)**

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

% Solids	84.8	%	1	BGG0629	07/20/23	07/21/23	Calculation
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Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/23 15:10**

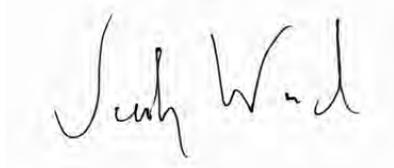
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.516	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/18/23 15:10**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.63		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

Summit Scientific



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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

SEP01 DL 3 feet
2307352-06 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Benzene	ND	0.0020	mg/kg	1	BGG0610	07/20/23	07/23/23	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: **07/18/23 13:49**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: 1,2-Dichloroethane-d4	0.0380	95.0 %	50-150	"	"	"	"	"	
Surrogate: Toluene-d8	0.0407	102 %	50-150	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150	"	"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0614	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
Surrogate: o-Terphenyl	11.0	88.2 %	30-150	"	"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

SEP01 DL 3 feet
2307352-06 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0644	07/20/23	07/21/23	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: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0245	73.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0203	60.9 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.433	0.0100	mg/L	1	BGG0641	07/20/23	07/27/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/23 13:49**

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 - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

SEP01 DL 3 feet
2307352-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Arsenic	1.44	0.200	mg/kg dry	1	BGG0602	07/20/23	07/27/23	EPA 6020B	
Barium	31.8	0.400	"	"	"	"	"	"	
Cadmium	ND	0.200	"	"	"	"	"	"	
Copper	3.32	0.400	"	"	"	"	"	"	
Lead	3.62	0.200	"	"	"	"	"	"	
Nickel	2.61	0.400	"	"	"	"	"	"	
Selenium	ND	0.288	"	"	"	"	"	"	
Silver	ND	0.0200	"	"	"	"	"	"	
Zinc	10.8	0.400	"	"	"	"	"	"	

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGG0748	07/24/23	07/24/23	EPA 7196A	

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

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	23.8	0.0553	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	11.3	0.0553	"	"	"	"	"	"	
Sodium	9.87	0.0553	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.417	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

**SEP01 DL 3 feet
 2307352-06 (Soil)**

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Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	90.4		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.308	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/18/23 13:49**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

SEP02 DL 3 feet
2307352-07 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	BGG0610	07/20/23	07/23/23	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: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4	0.0386	96.6 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0413	103 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0432	108 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	BGG0614	07/20/23	07/21/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	10.8	86.7 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

SEP02 DL 3 feet
2307352-07 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGG0644	07/20/23	07/21/23	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: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0204	61.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0178	53.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.326	0.0100	mg/L	1	BGG0641	07/20/23	07/27/23	EPA 6020B	

Total Metals by EPA 6020B

Date Sampled: **07/18/23 13:42**

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 - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

SEP02 DL 3 feet
2307352-07 (Soil)

Summit Scientific

Total Metals by EPA 6020B

Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
Arsenic	1.84	0.200	mg/kg dry	1	BGG0602	07/20/23	07/27/23	EPA 6020B
Barium	33.5	0.400	"	"	"	"	"	"
Cadmium	ND	0.200	"	"	"	"	"	"
Copper	3.62	0.400	"	"	"	"	"	"
Lead	4.76	0.200	"	"	"	"	"	"
Nickel	2.95	0.400	"	"	"	"	"	"
Selenium	0.235	0.301	"	"	"	"	"	"
Silver	ND	0.0200	"	"	"	"	"	"
Zinc	12.2	0.400	"	"	"	"	"	"

Hexavalent Chromium by EPA Method 7196

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Chromium, Hexavalent	ND	0.30	mg/kg dry	1	BGG0748	07/24/23	07/24/23	EPA 7196A	

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

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	19.3	0.0580	mg/L dry	1	BGG0623	07/20/23	07/22/23	EPA 6020B	
Magnesium	12.3	0.0580	"	"	"	"	"	"	
Sodium	2.67	0.0580	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.117	0.00100	units	1	BGG0744	07/24/23	07/24/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

SEP02 DL 3 feet
2307352-07 (Soil)

Summit Scientific

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.3		%	1	BGG0629	07/20/23	07/21/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.308	0.0100	mmhos/cm	1	BGG0663	07/21/23	07/21/23	EPA 120.1	

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

Date Sampled: **07/18/23 13:42**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.76		pH Units	1	BGG0662	07/21/23	07/21/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

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 BGG0610 - EPA 5030 Soil MS

Blank (BGG0610-BLK1)

Prepared: 07/20/23 Analyzed: 07/22/23

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	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0365		"	0.0400		91.4	50-150			
<i>Surrogate: Toluene-d8</i>	0.0406		"	0.0400		101	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0413		"	0.0400		103	50-150			

LCS (BGG0610-BS1)

Prepared: 07/20/23 Analyzed: 07/22/23

Benzene	0.114	0.0020	mg/kg	0.100		114	70-130			
Toluene	0.124	0.0050	"	0.100		124	70-130			
Ethylbenzene	0.113	0.0050	"	0.100		113	70-130			
m,p-Xylene	0.219	0.010	"	0.200		110	70-130			
o-Xylene	0.108	0.0050	"	0.100		108	70-130			
1,2,4-Trimethylbenzene	0.113	0.0050	"	0.100		113	70-130			
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100		116	70-130			
Naphthalene	0.102	0.0038	"	0.100		102	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0357		"	0.0400		89.2	50-150			
<i>Surrogate: Toluene-d8</i>	0.0409		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0406		"	0.0400		102	50-150			

Matrix Spike (BGG0610-MS1)

Source: 2307335-01

Prepared: 07/20/23 Analyzed: 07/22/23

Benzene	0.113	0.0020	mg/kg	0.100	ND	113	70-130			
Toluene	0.123	0.0050	"	0.100	ND	123	70-130			
Ethylbenzene	0.110	0.0050	"	0.100	ND	110	70-130			
m,p-Xylene	0.216	0.010	"	0.200	ND	108	70-130			
o-Xylene	0.108	0.0050	"	0.100	ND	108	70-130			
1,2,4-Trimethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130			
1,3,5-Trimethylbenzene	0.116	0.0050	"	0.100	ND	116	70-130			
Naphthalene	0.108	0.0038	"	0.100	ND	108	70-130			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	0.0364		"	0.0400		91.0	50-150			
<i>Surrogate: Toluene-d8</i>	0.0409		"	0.0400		102	50-150			
<i>Surrogate: 4-Bromofluorobenzene</i>	0.0404		"	0.0400		101	50-150			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Summit Scientific

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

Batch BGG0610 - EPA 5030 Soil MS

Matrix Spike Dup (BGG0610-MSD1)	Source: 2307335-01			Prepared: 07/20/23 Analyzed: 07/22/23						
Benzene	0.113	0.0020	mg/kg	0.100	ND	113	70-130	0.345	30	
Toluene	0.122	0.0050	"	0.100	ND	122	70-130	0.808	30	
Ethylbenzene	0.112	0.0050	"	0.100	ND	112	70-130	1.43	30	
m,p-Xylene	0.217	0.010	"	0.200	ND	108	70-130	0.486	30	
o-Xylene	0.108	0.0050	"	0.100	ND	108	70-130	0.0279	30	
1,2,4-Trimethylbenzene	0.114	0.0050	"	0.100	ND	114	70-130	1.49	30	
1,3,5-Trimethylbenzene	0.115	0.0050	"	0.100	ND	115	70-130	0.260	30	
Naphthalene	0.113	0.0038	"	0.100	ND	113	70-130	4.69	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0371</i>		<i>"</i>	<i>0.0400</i>		<i>92.8</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0406</i>		<i>"</i>	<i>0.0400</i>		<i>102</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0403</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>50-150</i>			

Summit Scientific

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGG0614 - EPA 3550A

Blank (BGG0614-BLK1)

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	12.0		"	12.5		96.0	30-150				

LCS (BGG0614-BS1)

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	455	50	mg/kg	500		91.0	70-130				
Surrogate: <i>o</i> -Terphenyl	11.4		"	12.5		91.5	30-150				

Matrix Spike (BGG0614-MS1)

Source: 2307335-01

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	452	50	mg/kg	500	7.31	89.0	70-130				
Surrogate: <i>o</i> -Terphenyl	11.5		"	12.5		92.4	30-150				

Matrix Spike Dup (BGG0614-MSD1)

Source: 2307335-01

Prepared: 07/20/23 Analyzed: 07/21/23

C10-C28 (DRO)	455	50	mg/kg	500	7.31	89.6	70-130	0.656	20		
Surrogate: <i>o</i> -Terphenyl	11.3		"	12.5		90.7	30-150				

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

PAH by EPA Method 8270D SIM - Quality Control
Summit Scientific

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

Batch BGG0644 - EPA 5030 Soil MS

Blank (BGG0644-BLK1)

Prepared: 07/20/23 Analyzed: 07/21/23

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	0.0257		"	0.0333		77.2	40-150			
Surrogate: Fluoranthene-d10	0.0223		"	0.0333		66.9	40-150			

LCS (BGG0644-BS1)

Prepared: 07/20/23 Analyzed: 07/21/23

Acenaphthene	0.0320	0.00500	mg/kg	0.0333		96.0	31-137			
Anthracene	0.0315	0.00500	"	0.0333		94.5	30-120			
Benzo (a) anthracene	0.0349	0.00500	"	0.0333		105	30-120			
Benzo (a) pyrene	0.0319	0.00500	"	0.0333		95.6	30-120			
Benzo (b) fluoranthene	0.0336	0.00500	"	0.0333		101	30-120			
Benzo (k) fluoranthene	0.0322	0.00500	"	0.0333		96.6	30-120			
Chrysene	0.0329	0.00500	"	0.0333		98.6	30-120			
Dibenz (a,h) anthracene	0.0303	0.00500	"	0.0333		90.9	30-120			
Fluoranthene	0.0318	0.00500	"	0.0333		95.4	30-120			
Fluorene	0.0321	0.00500	"	0.0333		96.3	30-120			
Indeno (1,2,3-cd) pyrene	0.0237	0.00500	"	0.0333		71.0	30-120			
Pyrene	0.0352	0.00500	"	0.0333		106	35-142			
1-Methylnaphthalene	0.0316	0.00500	"	0.0333		94.8	35-142			
2-Methylnaphthalene	0.0339	0.00500	"	0.0333		102	35-142			
Surrogate: 2-Methylnaphthalene-d10	0.0268		"	0.0333		80.4	40-150			
Surrogate: Fluoranthene-d10	0.0327		"	0.0333		98.0	40-150			

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Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

PAH by EPA Method 8270D SIM - Quality Control

Summit Scientific

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

Batch BGG0644 - EPA 5030 Soil MS

Matrix Spike (BGG0644-MS1)	Source: 2307333-01			Prepared: 07/20/23 Analyzed: 07/21/23						
Acenaphthene	0.0328	0.00500	mg/kg	0.0333	ND	98.3	31-137			
Anthracene	0.0209	0.00500	"	0.0333	ND	62.6	30-120			
Benzo (a) anthracene	0.0201	0.00500	"	0.0333	ND	60.4	30-120			
Benzo (a) pyrene	0.0192	0.00500	"	0.0333	ND	57.7	30-120			
Benzo (b) fluoranthene	0.0209	0.00500	"	0.0333	ND	62.7	30-120			
Benzo (k) fluoranthene	0.0209	0.00500	"	0.0333	ND	62.8	30-120			
Chrysene	0.0234	0.00500	"	0.0333	ND	70.1	30-120			
Dibenz (a,h) anthracene	0.0188	0.00500	"	0.0333	ND	56.4	30-120			
Fluoranthene	0.0261	0.00500	"	0.0333	ND	78.3	30-120			
Fluorene	0.0340	0.00500	"	0.0333	ND	102	30-120			
Indeno (1,2,3-cd) pyrene	0.0134	0.00500	"	0.0333	ND	40.2	30-120			
Pyrene	0.0230	0.00500	"	0.0333	ND	68.9	35-142			
1-Methylnaphthalene	0.0435	0.00500	"	0.0333	0.0132	90.9	15-130			
2-Methylnaphthalene	0.0368	0.00500	"	0.0333	ND	110	15-130			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0211</i>		"	<i>0.0333</i>		<i>63.4</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0231</i>		"	<i>0.0333</i>		<i>69.3</i>	<i>40-150</i>			

Matrix Spike Dup (BGG0644-MSD1)	Source: 2307333-01			Prepared: 07/20/23 Analyzed: 07/21/23						
Acenaphthene	0.0180	0.00500	mg/kg	0.0333	ND	54.1	31-137	58.0	30	QR-02
Anthracene	0.0149	0.00500	"	0.0333	ND	44.7	30-120	33.5	30	QR-02
Benzo (a) anthracene	0.0165	0.00500	"	0.0333	ND	49.4	30-120	20.1	30	
Benzo (a) pyrene	0.0139	0.00500	"	0.0333	ND	41.7	30-120	32.2	30	QR-02
Benzo (b) fluoranthene	0.0172	0.00500	"	0.0333	ND	51.7	30-120	19.2	30	
Benzo (k) fluoranthene	0.0167	0.00500	"	0.0333	ND	50.0	30-120	22.6	30	
Chrysene	0.0181	0.00500	"	0.0333	ND	54.4	30-120	25.2	30	
Dibenz (a,h) anthracene	0.0153	0.00500	"	0.0333	ND	45.9	30-120	20.5	30	
Fluoranthene	0.0171	0.00500	"	0.0333	ND	51.4	30-120	41.6	30	QR-02
Fluorene	0.0223	0.00500	"	0.0333	ND	66.9	30-120	41.5	30	QR-02
Indeno (1,2,3-cd) pyrene	0.0157	0.00500	"	0.0333	ND	47.2	30-120	16.2	30	
Pyrene	0.0199	0.00500	"	0.0333	ND	59.8	35-142	14.2	30	
1-Methylnaphthalene	0.0259	0.00500	"	0.0333	0.0132	38.0	15-130	50.8	50	QR-02
2-Methylnaphthalene	0.0192	0.00500	"	0.0333	ND	57.5	15-130	63.1	50	QR-02
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0150</i>		"	<i>0.0333</i>		<i>45.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0141</i>		"	<i>0.0333</i>		<i>42.2</i>	<i>40-150</i>			

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Fremont Environmental
 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

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

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

Batch BGG0641 - EPA 3050B

Blank (BGG0641-BLK1)

Prepared: 07/20/23 Analyzed: 07/27/23

Boron ND 0.0100 mg/L

LCS (BGG0641-BS1)

Prepared: 07/20/23 Analyzed: 07/27/23

Boron 5.54 0.0100 mg/L 5.00 111 80-120

Duplicate (BGG0641-DUP1)

Source: 2307335-03

Prepared: 07/20/23 Analyzed: 07/27/23

Boron 0.534 0.0100 mg/L 0.526 1.66 20

Matrix Spike (BGG0641-MS1)

Source: 2307335-03

Prepared: 07/20/23 Analyzed: 07/27/23

Boron 5.79 0.0100 mg/L 5.00 0.526 105 75-125

Matrix Spike Dup (BGG0641-MSD1)

Source: 2307335-03

Prepared: 07/20/23 Analyzed: 07/27/23

Boron 5.88 0.0100 mg/L 5.00 0.526 107 75-125 1.60 25

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGG0602 - EPA 3050B

Blank (BGG0602-BLK1)

Prepared: 07/20/23 Analyzed: 07/27/23

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

LCS (BGG0602-BS1)

Prepared: 07/20/23 Analyzed: 07/27/23

Arsenic	38.3	0.200	mg/kg wet	40.0	95.8	80-120
Barium	42.1	0.400	"	40.0	105	80-120
Cadmium	1.76	0.200	"	2.00	87.8	80-120
Copper	38.2	0.400	"	40.0	95.6	80-120
Lead	22.2	0.200	"	20.0	111	80-120
Nickel	37.5	0.400	"	40.0	93.7	80-120
Selenium	3.54	0.260	"	4.00	88.6	80-120
Silver	1.75	0.0200	"	2.00	87.4	80-120
Zinc	37.5	0.400	"	40.0	93.8	80-120

Duplicate (BGG0602-DUP1)

Source: 2307326-64

Prepared: 07/20/23 Analyzed: 07/27/23

Arsenic	3.90	0.200	mg/kg dry	4.50	14.3	20
Barium	412	0.400	"	490	17.3	20
Cadmium	0.389	0.200	"	0.407	4.60	20
Copper	5.37	0.400	"	5.29	1.54	20
Lead	9.24	0.200	"	10.5	12.6	20
Nickel	4.95	0.400	"	5.13	3.66	20
Selenium	ND	0.340	"	ND		20
Silver	0.0550	0.0200	"	0.0508	7.92	20
Zinc	20.0	0.400	"	19.7	1.33	20

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

Total Metals by EPA 6020B - Quality Control
Summit Scientific

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

Batch BGG0602 - EPA 3050B

Matrix Spike (BGG0602-MS1)

Source: 2307326-64

Prepared: 07/20/23 Analyzed: 07/27/23

Arsenic	43.1	0.200	mg/kg dry	52.4	4.50	73.7	75-125				QM-07
Barium	524	0.400	"	52.4	490	65.0	75-125				QM-07
Cadmium	2.65	0.200	"	2.62	0.407	85.5	75-125				
Copper	31.7	0.400	"	52.4	5.29	50.5	75-125				QM-07
Lead	32.0	0.200	"	26.2	10.5	82.0	75-125				
Nickel	31.4	0.400	"	52.4	5.13	50.2	75-125				QM-07
Selenium	4.45	0.340	"	5.24	ND	85.0	75-125				
Silver	2.23	0.0200	"	2.62	0.0508	83.2	75-125				
Zinc	49.2	0.400	"	52.4	19.7	56.2	75-125				QM-07

Matrix Spike Dup (BGG0602-MSD1)

Source: 2307326-64

Prepared: 07/20/23 Analyzed: 07/27/23

Arsenic	43.3	0.200	mg/kg dry	52.4	4.50	74.2	75-125	0.610	25		QM-07
Barium	528	0.400	"	52.4	490	72.6	75-125	0.760	25		QM-07
Cadmium	2.69	0.200	"	2.62	0.407	87.2	75-125	1.65	25		
Copper	32.1	0.400	"	52.4	5.29	51.1	75-125	0.969	25		QM-07
Lead	32.4	0.200	"	26.2	10.5	83.6	75-125	1.30	25		
Nickel	31.7	0.400	"	52.4	5.13	50.8	75-125	0.915	25		QM-07
Selenium	4.59	0.340	"	5.24	ND	87.7	75-125	3.06	25		
Silver	2.26	0.0200	"	2.62	0.0508	84.4	75-125	1.42	25		
Zinc	49.2	0.400	"	52.4	19.7	56.3	75-125	0.0160	25		QM-07

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 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

Hexavalent Chromium by EPA Method 7196 - Quality Control
Summit Scientific

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

Batch BGG0748 - 3060A Mod

Blank (BGG0748-BLK1)

Prepared & Analyzed: 07/24/23

Chromium, Hexavalent ND 0.30 mg/kg wet

LCS (BGG0748-BS1)

Prepared & Analyzed: 07/24/23

Chromium, Hexavalent 23.7 0.30 mg/kg wet 25.0 94.8 80-120

Duplicate (BGG0748-DUP1)

Source: 2307352-01

Prepared & Analyzed: 07/24/23

Chromium, Hexavalent ND 0.30 mg/kg dry ND 20

Matrix Spike (BGG0748-MS1)

Source: 2307352-01

Prepared & Analyzed: 07/24/23

Chromium, Hexavalent 23.0 0.30 mg/kg dry 25.5 ND 90.4 75-125

Matrix Spike Dup (BGG0748-MSD1)

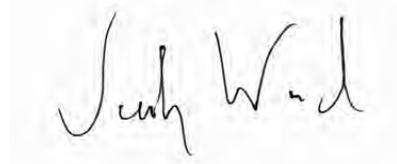
Source: 2307352-01

Prepared & Analyzed: 07/24/23

Chromium, Hexavalent 28.0 0.30 mg/kg dry 25.5 ND 110 75-125 19.4 20

Summit Scientific

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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

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

Summit Scientific

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

Batch BGG0623 - General Preparation

Blank (BGG0623-BLK1)

Prepared: 07/20/23 Analyzed: 07/22/23

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

LCS (BGG0623-BS1)

Prepared: 07/20/23 Analyzed: 07/22/23

Calcium	4.76	0.0500	mg/L wet	5.00	95.1	70-130				
Magnesium	6.05	0.0500	"	5.00	121	70-130				
Sodium	6.30	0.0500	"	5.00	126	70-130				

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 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank
 Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

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

Summit Scientific

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

Batch BGG0629 - General Preparation

Duplicate (BGG0629-DUP1)

Source: 2307352-01

Prepared: 07/20/23 Analyzed: 07/21/23

% Solids	98.5	%		98.1		0.466	20
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 PO Box 1289
 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

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

Summit Scientific

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

Batch BGG0663 - General Preparation

Blank (BGG0663-BLK1)

Prepared & Analyzed: 07/21/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGG0663-BS1)

Prepared & Analyzed: 07/21/23

Specific Conductance (EC) 0.156 0.0100 mmhos/cm 0.150 104 95-105

Duplicate (BGG0663-DUP1)

Source: 2307344-01

Prepared & Analyzed: 07/21/23

Specific Conductance (EC) 1.48 0.0100 mmhos/cm 1.48 0.00 20

Summit Scientific

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 Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
 Project Manager: Paul Henchan

Reported:
 08/17/23 16:12

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

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

Batch BGG0662 - General Preparation

LCS (BGG0662-BS1)			Prepared & Analyzed: 07/21/23								
pH	8.83		pH Units	9.18	96.2	95-105					
Duplicate (BGG0662-DUP1)			Source: 2307344-01		Prepared & Analyzed: 07/21/23						
pH	8.19		pH Units	7.87			3.99		20		

Batch BGH0106 - General Preparation

LCS (BGH0106-BS1)			Prepared & Analyzed: 08/02/23								
pH	9.23		pH Units	9.18	101	95-105					
Duplicate (BGH0106-DUP1)			Source: 2306502-03		Prepared & Analyzed: 08/02/23						
pH	5.51		pH Units	5.53			0.362		20		

Summit Scientific

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PO Box 1289
Wellington CO, 80549

Project: Noble - Orr USX A03-15D Tank

Project Number: UWRWE-A2568-ABN
Project Manager: Paul Henchan

Reported:
08/17/23 16:12

Notes and Definitions

- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- 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