

FREMONT ENVIRONMENTAL INC.

April 25, 2023

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

Subject: **Facility Closure Data Submittal**
Patriot B-65N64W Tank Battery
NWSE Sec. 16, T5N, R64W
Weld County, Colorado
Fremont Project No. C023-036
Facility # 483056, Remediation #25418

Dear Mr. Peterson:

As you requested, Fremont Environmental Inc. (Fremont) personnel conducted Facility Closure activities for the Noble Energy Inc. (Noble) Patriot B-65N64W tank battery. Details of the Patriot B-65N64W facility closure activities are documented in the attached Closure Report.

Organic soil impacts were encountered at the separator during abandonment activities. Groundwater was not encountered during the facility abandonment activities. Additional site investigation is needed to determine the magnitude and extent of impacts at the site.

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

Sincerely,

FREMONT ENVIRONMENTAL INC.

A handwritten signature in black ink, appearing to read "Ethan Black", written over a light blue rectangular background.

Ethan D. Black, P.G.
Geologist

Attachments:

Facility Closure Checklist
Tables
Figures
Photos
Laboratory Reports

**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														
Removal Date														
Sample taken?														
PID Readings														
Photo Number(s)														
Other Facility Equipment														
Equipment type														
Equipment Condition														
Age														
Soil impacts observed during														
PID Readings														
Sample taken?														
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 Access Line								
PID Readings								
Sample taken? Location/Sample ID#								
Photo Number(s)								
Other observations regarding partially buried vessels:								
Summary								
Was impacted soil identified? <div style="display: flex; justify-content: space-between;"> No Yes - less than 10 cubic yards Yes - more than 10 cubic yards </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 style="display: flex; justify-content: space-between;"> No Yes - not impacted or in contact with impacted soils Yes - groundwater impacted and/or in contact with impacted soils </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:								

TABLE 1
SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
PATRIOT B-65N64W, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-036

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)
COGCC Table 915-1 Limits (Residential SSL)			1.2	490	5.8	58	30	27	2	500**		
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.0026	0.69	0.78	9.9	0.0081	0.0087	0.0038	500**		
AST E SURF.	02/13/2023	Surface	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
AST W SURF.	02/13/2023	Surface	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV E FLOOR 5FT	02/13/2023	5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWV W FLOOR 5FT	02/13/2023	5	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP E SURF.	02/13/2023	Surface	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	0.02	<0.50	<50	<50

Bold faced values exceed the COGCC Table 915-1 concentrations

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

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

TABLE 2
SUMMARY OF POLYCYCLIC AROMATIC HYDROCARBON SOIL CHEMISTRY DATA
NOBLE ENERGY INC.
PATRIOT B-65N64W, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-036

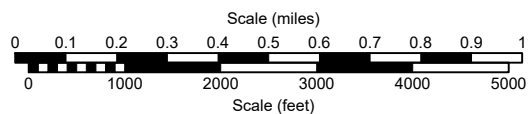
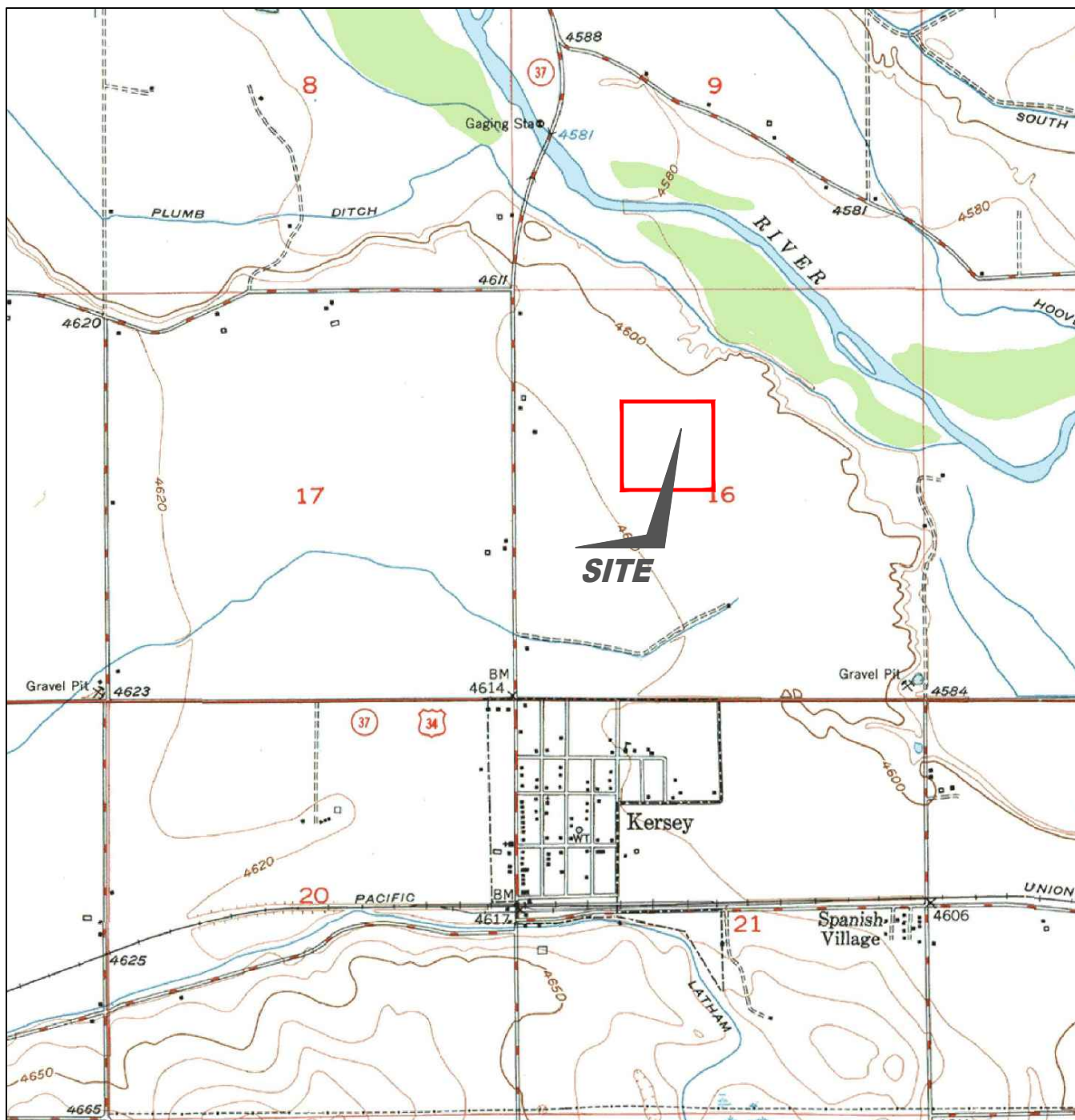
Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3- cd) Pyrene (mg/kg)	Pyrene (mg/kg)	1-Methyl - Naphthalene (mg/kg)	2-Methyl- Naphthalene (mg/kg)
COGCC 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
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.55	5.8	0.011	0.24	0.3	2.9	9	0.096	8.9	0.54	0.98	1.3	0.006	0.019
AST E SURF.	02/13/2023	Surface	<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
AST W SURF.	02/13/2023	Surface	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
PWV E FLOOR 5FT	02/13/2023	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
PWV W FLOOR 5FT	02/13/2023	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
SEP E SURF.	02/13/2023	Surface	0.149	0.206	0.38	0.212	0.374	0.119	0.349	<0.00500	0.515	0.174	0.143	0.534	0.0248	0.0549

Bold faced values exceed the COGCC Table 915-1 concentrations

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

TABLE 3
SUMMARY OF SOIL SUITABILITY FOR RECLAMATION
NOBLE ENERGY INC.
PATRIOT B-65N64W, WELD COUNTY, COLORADO
FREMONT PROJECT NO. C023-036

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
AST E SURF.	02/13/2023	Surface	6.74	0.591	0.137	0.155
AST W SURF.	02/13/2023	Surface	7.85	0.262	0.433	0.202
PWV E FLOOR 5FT	02/13/2023	5	8.37	0.232	0.521	0.125
PWV W FLOOR 5FT	02/13/2023	5	7.74	1.08	1.99	0.11
SEP E SURF.	02/13/2023	Surface	7.66	0.578	0.388	0.383



USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1
SITE LOCATION MAP

NOBLE ENERGY INC - PATRIOT B-65N64W TANK BATTERY
 NWSE Sec. 16, T5N, R64W, 6th PM
 Weld County, Colorado
 40.396814°, -104.554890°

Project # CO23-036	API #	Facility # 483056
Date 08/14/2023	Remediation # 25418	Filename 23036T





LEGEND

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

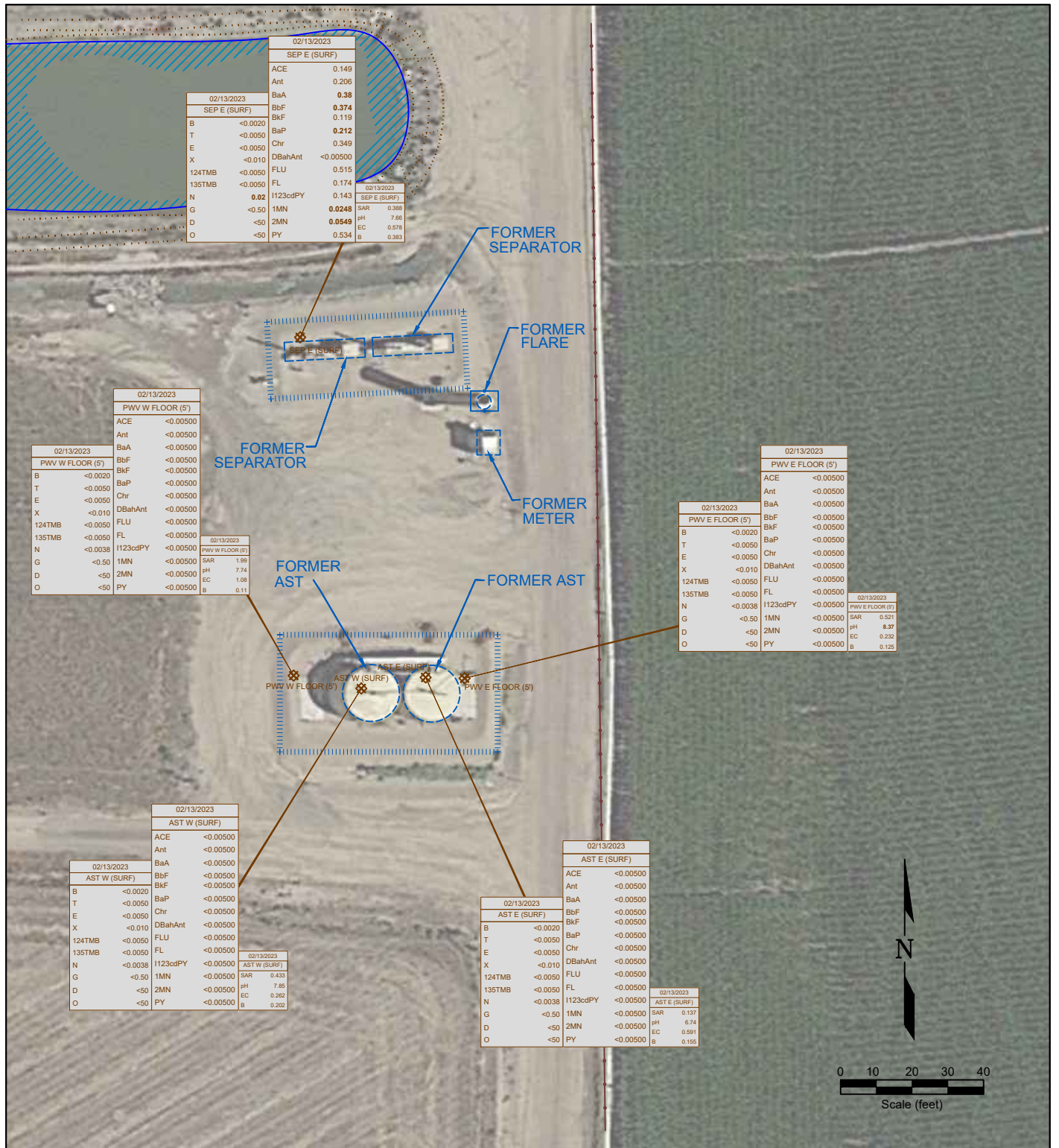
FL01 PID READING LOCATION IDENTIFICATION
PID 0.1 PHOTO IONIZATION DETECTION (ppm)

Figure 2
SITE MAP

NOBLE ENERGY INC - PATRIOT B-65N64W TANK BATTERY
NWSE Sec. 16, T5N, R64W, 6th PM
Weld County, Colorado
40.396814°, -104.554890°

Project # CO23-036	API #	Facility # 483056
Date 08/14/2023	Remediation # 25418	Filename 23036Q





LEGEND

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

12/16/2022 FL01 (4)	DATE SAMPLED SAMPLE ID and DEPTH (ft)	12/16/2022 FL01 (4)	DATE SAMPLED SAMPLE ID and DEPTH (ft)	12/16/2022 FL01 (4)	DATE SAMPLED SAMPLE ID and DEPTH (ft)
ACE	<0.0050	B	<0.0050	B	<0.0050
Ant	<0.0050	T	<0.0050	T	<0.0050
BaA	<0.0050	E	<0.0050	E	<0.0050
BbF	<0.0050	X	<0.010	X	<0.010
BkF	<0.0050	124TMB	<0.0050	124TMB	<0.0050
BaP	<0.0050	135TMB	<0.0050	135TMB	<0.0050
Chr	<0.0050	N	<0.0038	N	<0.0038
DBahAnt	<0.0050	G	<0.50	G	<0.50
FLU	<0.0050	D	<50	D	<50
FL	<0.0050	O	<50	O	<50
1123cdPY	<0.0050				
1MN	<0.0050				
2MN	<0.0050				
PY	<0.0050				

Figure 3
SOIL CHEMISTRY MAP

NOBLE ENERGY INC - PATRIOT B-65N64W TANK BATTERY
NWSE Sec. 16, T5N, R64W, 6th PM
Weld County, Colorado
40.396814°, -104.554890°

Project # CO23-036	API #	Facility # 483056	
Date 08/14/2023	Remediation # 25418	Filename 23036Q	

Photo Log



Description:

1 - Patriot B 65N64W tank battery AST footprint, looking west

Photo Log



Description:

2 - Patriot B 65N64W tank batter dump line trench looking east

Photo Log



Description:

3 - Patriot B 65N64W E PWV excavation

Photo Log



Description:

4 - Patriot B 65N64W W PWV excavation

Photo Log



Description:

5 - Patriot B 65N64W separator footprint

Summit Scientific

4653 Table Mountain Drive, Golden, Colorado 80403

303.277.9310

January 23, 2023

Paul Henchan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Patriot Tank Battery

Work Order #2301329

Enclosed are the results of analyses for samples received by Summit Scientific on 01/17/23 16:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Sheely".

Scott Sheely For Paul Shrewsbury
President



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 16:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST-N Surf	2301329-01	Soil	01/16/23 00:00	01/17/23 16:30
AST-S Surf	2301329-02	Soil	01/16/23 00:00	01/17/23 16:30
SEP 1 Surf	2301329-03	Soil	01/16/23 00:00	01/17/23 16:30
SEP 2 Surf	2301329-04	Soil	01/16/23 00:00	01/17/23 16:30
PVW Floor 5 ft	2301329-05	Soil	01/16/23 00:00	01/17/23 16:30
BKG 3 ft	2301329-06	Soil	01/16/23 00:00	01/17/23 16:30

Summit Scientific

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

Summit Scientific

2301329

S₂

4653 Table Mountain Drive ♦ Golden, Colorado 80403
303-277-9310 ♦ 303-374-5933 (f)

Page 1 of

Client: Fremont Environmental

Project Manager: Paul Henehan

Address:

E-Mail: Fremont Distribution List: PaulH, EthanB, JeffG and ChrisL. @fremontenv.com

City/State/Zip:

Bill to : Dan

Phone:

Project Name: Noble - Patriot Tank Battery

Sampler Name:

Project Number:

ID	Sample Description	Date Sampled	Time Sampled	# of containers	Preservative				Matrix			Analysis Requested								Special Instructions
					HCl	HNO ₃	None	Other	Water	Soil	Air-Canister #	Other	BTEX, TMBs, Naph.	TPH	PAH (915)	EC, SAR, pH, Boron	Metals (915)	TDS, Chloride, Sulfate	HOLD	
1	AST-N SURF.	1/16/23		2			X			X			X	X	X					
2	AST-S SURF.																			
3	SEP 1 SURF																			
4	SEP 2 SURF																			
5	PWV Floor 5FT																			
6	BKG 3FT																			
7																				
8																				
9																				
10																				

Relinquished by: EJH-Blok	Date/Time: 1/17/23 1600	Received by: S ₂	Date/Time: 1/17/23 1600	Turn Around Time (Check) Same Day _____ 72 hours 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____	Notes:
Relinquished by: S ₂	Date/Time: 1/17/23 1630	Received by: [Signature]	Date/Time: 1/17/23 1630	Sample Integrity: Temperature Upon Receipt: 8.0	
Relinquished by:	Date/Time:	Received by:	Date/Time:	Samples Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No	

S₂

Sample Receipt Checklist

S2 Work Order#

2301329

Client: Fremont

Client Project ID:

Noble Patriot Tank Battalion

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

Airbill #:

☐ ☐ ☐ ☐ ☐

Matrix (Check all that apply)

Air

☐

Soil/Solid

☐

Water

☐

Other

☐

Temp (°C)

8.0

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 ICE
If custody seals are present, are they intact? ⁽¹⁾	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are samples due within 48 hours present?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Are water samples with short hold times present? Note the short hold analysis in the comments column - pH, Nitrate/Nitrite, Ferrous Iron (Fe ²⁺), Hexavalent Chromium (Cr ⁶⁺ , Cr VI), COD/BOD, Total Coliform, E. Coli, Total Residual Chlorine (TRC), Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? ⁽¹⁾	<input type="checkbox"/>	<input checked="" 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 checked="" 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.

Custodian Printed Name

Date/Time

1-17-23 1430



Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

AST-N Surf
2301329-01 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0425	01/18/23	01/19/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0476	119 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0381	95.2 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0416	104 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0427	01/18/23	01/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.0	120 %	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 - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

AST-N Surf
2301329-01 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0456	01/19/23	01/20/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0217	65.2 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0281	84.3 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0800	0.0100	mg/L	1	BGA0476	01/19/23	01/21/23	EPA 6020B	

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

Date Sampled: **01/16/23 00:00**

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 - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

AST-N Surf
2301329-01 (Soil)

Summit Scientific

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

Calcium	15.4	0.0536	mg/L dry	1	BGA0487	01/19/23	01/21/23	EPA 6020B
Magnesium	8.00	0.0536	"	"	"	"	"	"
Sodium	10.7	0.0536	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.551	0.00100	units	1	BGA0545	01/23/23	01/23/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.3		%	1	BGA0495	01/20/23	01/20/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.421	0.0100	mmhos/cm	1	BGA0505	01/20/23	01/20/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	9.18		pH Units	1	BGA0504	01/20/23	01/20/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 16:01

AST-S Surf
2301329-02 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0425	01/18/23	01/19/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0471	118 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0382	95.6 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0426	106 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0427	01/18/23	01/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.7	125 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

AST-S Surf
2301329-02 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0456	01/19/23	01/20/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0228	68.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0284	85.1 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0750	0.0100	mg/L	1	BGA0476	01/19/23	01/21/23	EPA 6020B	

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

Date Sampled: **01/16/23 00:00**

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 - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

AST-S Surf
2301329-02 (Soil)

Summit Scientific

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

Calcium	33.9	0.0534	mg/L dry	1	BGA0487	01/19/23	01/21/23	EPA 6020B
Magnesium	4.10	0.0534	"	"	"	"	"	"
Sodium	6.02	0.0534	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.260	0.00100	units	1	BGA0545	01/23/23	01/23/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.6		%	1	BGA0495	01/20/23	01/20/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.308	0.0100	mmhos/cm	1	BGA0505	01/20/23	01/20/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.46		pH Units	1	BGA0504	01/20/23	01/20/23	EPA 9045D	

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 16:01

SEP 1 Surf
2301329-03 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0425	01/18/23	01/19/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0438	109 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0377	94.3 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0404	101 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0427	01/18/23	01/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.9	119 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

SEP 1 Surf
2301329-03 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0456	01/19/23	01/20/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0252	75.6 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0295	88.5 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0872	0.0100	mg/L	1	BGA0476	01/19/23	01/21/23	EPA 6020B	

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

Date Sampled: **01/16/23 00:00**

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 - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henahan

Reported:
01/23/23 16:01

SEP 1 Surf
2301329-03 (Soil)

Summit Scientific

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

Calcium	12.3	0.0542	mg/L dry	1	BGA0487	01/19/23	01/21/23	EPA 6020B
Magnesium	3.04	0.0542	"	"	"	"	"	"
Sodium	4.34	0.0542	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.287	0.00100	units	1	BGA0545	01/23/23	01/23/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	92.2		%	1	BGA0495	01/20/23	01/20/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.378	0.0100	mmhos/cm	1	BGA0505	01/20/23	01/20/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.89		pH Units	1	BGA0504	01/20/23	01/20/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henehan

Reported:
01/23/23 16:01

SEP 2 Surf
2301329-04 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0425	01/18/23	01/19/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0444	111 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.8 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0427	01/18/23	01/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	15.3	122 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

SEP 2 Surf
2301329-04 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0456	01/19/23	01/20/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0268	80.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0340	102 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.129	0.0100	mg/L	1	BGA0476	01/19/23	01/21/23	EPA 6020B	

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

Date Sampled: **01/16/23 00:00**

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 - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

SEP 2 Surf
2301329-04 (Soil)

Summit Scientific

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

Calcium	13.8	0.0562	mg/L dry	1	BGA0487	01/19/23	01/21/23	EPA 6020B
Magnesium	3.18	0.0562	"	"	"	"	"	"
Sodium	2.01	0.0562	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.127	0.00100	units	1	BGA0545	01/23/23	01/23/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	89.0		%	1	BGA0495	01/20/23	01/20/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.364	0.0100	mmhos/cm	1	BGA0505	01/20/23	01/20/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.82		pH Units	1	BGA0504	01/20/23	01/20/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

PVW Floor 5 ft
2301329-05 (Soil)

Summit Scientific

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Benzene	ND	0.0020	mg/kg	1	BGA0425	01/18/23	01/19/23	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: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: 1,2-Dichloroethane-d4	0.0455	114 %	50-150		"	"	"	"	
Surrogate: Toluene-d8	0.0383	95.7 %	50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene	0.0410	103 %	50-150		"	"	"	"	

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
C10-C28 (DRO)	ND	50	mg/kg	1	BGA0427	01/18/23	01/18/23	EPA 8015M	
C28-C36 (ORO)	ND	50	"	"	"	"	"	"	

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit							
Surrogate: o-Terphenyl	14.0	112 %	30-150		"	"	"	"	

PAH by EPA Method 8270D SIM

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

PVW Floor 5 ft
2301329-05 (Soil)

Summit Scientific

PAH by EPA Method 8270D SIM

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500	mg/kg	1	BGA0456	01/19/23	01/20/23	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: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10	0.0278	83.3 %	40-150		"	"	"	"	
Surrogate: Fluoranthene-d10	0.0355	107 %	40-150		"	"	"	"	

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.0808	0.0100	mg/L	1	BGA0476	01/19/23	01/21/23	EPA 6020B	

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

Date Sampled: **01/16/23 00:00**

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 - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

PVW Floor 5 ft
2301329-05 (Soil)

Summit Scientific

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

Calcium	10.1	0.0524	mg/L dry	1	BGA0487	01/19/23	01/21/23	EPA 6020B
Magnesium	2.05	0.0524	"	"	"	"	"	"
Sodium	1.33	0.0524	"	"	"	"	"	"

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.0998	0.00100	units	1	BGA0545	01/23/23	01/23/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.4		%	1	BGA0495	01/20/23	01/20/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.391	0.0100	mmhos/cm	1	BGA0505	01/20/23	01/20/23	EPA 120.1	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.92		pH Units	1	BGA0504	01/20/23	01/20/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

BKG 3 ft
2301329-06 (Soil)

Summit Scientific

Total Metals by EPA 6020B Hot Water Soluble Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Boron	0.127	0.0100	mg/L	1	BGA0476	01/19/23	01/21/23	EPA 6020B	

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	9.97	0.0535	mg/L dry	1	BGA0487	01/19/23	01/21/23	EPA 6020B	
Magnesium	2.70	0.0535	"	"	"	"	"	"	
Sodium	3.35	0.0535	"	"	"	"	"	"	

Calculated Analysis

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.243	0.00100	units	1	BGA0545	01/23/23	01/23/23	Calculation	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	93.5		%	1	BGA0495	01/20/23	01/20/23	Calculation	

Specific Conductance by EPA Method 120.1, Saturated Paste Extraction

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.546	0.0100	mmhos/cm	1	BGA0505	01/20/23	01/20/23	EPA 120.1	

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

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

BKG 3 ft
2301329-06 (Soil)

Summit Scientific

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

Date Sampled: **01/16/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
pH	7.88			pH Units	1	BGA0504	01/20/23	01/20/23	EPA 9045D	

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0425 - EPA 5030 Soil MS

Blank (BGA0425-BLK1)

Prepared: 01/18/23 Analyzed: 01/19/23

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	0.0473		"	0.0400		118	50-150			
Surrogate: Toluene-d8	0.0384		"	0.0400		96.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0418		"	0.0400		104	50-150			

LCS (BGA0425-BS1)

Prepared: 01/18/23 Analyzed: 01/19/23

Benzene	0.112	0.0020	mg/kg	0.125		90.0	70-130			
Toluene	0.156	0.0050	"	0.125		125	70-130			
Ethylbenzene	0.148	0.0050	"	0.125		119	70-130			
m,p-Xylene	0.290	0.010	"	0.250		116	70-130			
o-Xylene	0.146	0.0050	"	0.125		117	70-130			
1,2,4-Trimethylbenzene	0.0909	0.0050	"	0.125		72.7	70-130			
1,3,5-Trimethylbenzene	0.0912	0.0050	"	0.125		73.0	70-130			
Naphthalene	0.0995	0.0038	"	0.125		79.6	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0410		"	0.0400		103	50-150			
Surrogate: Toluene-d8	0.0440		"	0.0400		110	50-150			
Surrogate: 4-Bromofluorobenzene	0.0420		"	0.0400		105	50-150			

Matrix Spike (BGA0425-MS1)

Source: 2301326-01

Prepared: 01/18/23 Analyzed: 01/19/23

Benzene	0.105	0.0020	mg/kg	0.125	ND	83.9	70-130			
Toluene	0.111	0.0050	"	0.125	ND	88.4	70-130			
Ethylbenzene	0.144	0.0050	"	0.125	ND	115	70-130			
m,p-Xylene	0.270	0.010	"	0.250	ND	108	70-130			
o-Xylene	0.134	0.0050	"	0.125	ND	107	70-130			
1,2,4-Trimethylbenzene	0.158	0.0050	"	0.125	ND	127	70-130			
1,3,5-Trimethylbenzene	0.158	0.0050	"	0.125	ND	127	70-130			
Naphthalene	0.162	0.0038	"	0.125	ND	130	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0480		"	0.0400		120	50-150			
Surrogate: Toluene-d8	0.0377		"	0.0400		94.4	50-150			
Surrogate: 4-Bromofluorobenzene	0.0383		"	0.0400		95.8	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0425 - EPA 5030 Soil MS

Matrix Spike Dup (BGA0425-MSD1)	Source: 2301326-01			Prepared: 01/18/23 Analyzed: 01/19/23						
Benzene	0.104	0.0020	mg/kg	0.125	ND	83.5	70-130	0.459	30	
Toluene	0.110	0.0050	"	0.125	ND	88.1	70-130	0.408	30	
Ethylbenzene	0.144	0.0050	"	0.125	ND	115	70-130	0.125	30	
m,p-Xylene	0.273	0.010	"	0.250	ND	109	70-130	0.840	30	
o-Xylene	0.134	0.0050	"	0.125	ND	107	70-130	0.201	30	
1,2,4-Trimethylbenzene	0.160	0.0050	"	0.125	ND	128	70-130	0.905	30	
1,3,5-Trimethylbenzene	0.160	0.0050	"	0.125	ND	128	70-130	1.26	30	
Naphthalene	0.137	0.0038	"	0.125	ND	109	70-130	17.0	30	
Surrogate: 1,2-Dichloroethane-d4	0.0486		"	0.0400		122	50-150			
Surrogate: Toluene-d8	0.0388		"	0.0400		97.1	50-150			
Surrogate: 4-Bromofluorobenzene	0.0386		"	0.0400		96.4	50-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

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

Batch BGA0427 - EPA 3550A

Blank (BGA0427-BLK1)

Prepared & Analyzed: 01/18/23

C10-C28 (DRO)	ND	50	mg/kg							
C28-C36 (ORO)	ND	50	"							
Surrogate: o-Terphenyl	15.9		"	12.5		127	30-150			

LCS (BGA0427-BS1)

Prepared & Analyzed: 01/18/23

C10-C28 (DRO)	437	50	mg/kg	500		87.4	70-130			
Surrogate: o-Terphenyl	16.4		"	12.5		131	30-150			

Matrix Spike (BGA0427-MS1)

Source: 2301326-01

Prepared & Analyzed: 01/18/23

C10-C28 (DRO)	436	50	mg/kg	500	12.9	84.5	70-130			
Surrogate: o-Terphenyl	15.0		"	12.5		120	30-150			

Matrix Spike Dup (BGA0427-MSD1)

Source: 2301326-01

Prepared & Analyzed: 01/18/23

C10-C28 (DRO)	450	50	mg/kg	500	12.9	87.3	70-130	3.16	20	
Surrogate: o-Terphenyl	16.8		"	12.5		134	30-150			

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0456 - EPA 5030 Soil MS

Blank (BGA0456-BLK1)

Prepared & Analyzed: 01/19/23

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	0.0265	"	0.0333	79.6	40-150
Surrogate: Fluoranthene-d10	0.0331	"	0.0333	99.4	40-150

LCS (BGA0456-BS1)

Prepared & Analyzed: 01/19/23

Acenaphthene	0.0332	0.00500	mg/kg	0.0333	99.5	31-137
Anthracene	0.0343	0.00500	"	0.0333	103	30-120
Benzo (a) anthracene	0.0304	0.00500	"	0.0333	91.3	30-120
Benzo (a) pyrene	0.0301	0.00500	"	0.0333	90.2	30-120
Benzo (b) fluoranthene	0.0299	0.00500	"	0.0333	89.6	30-120
Benzo (k) fluoranthene	0.0324	0.00500	"	0.0333	97.3	30-120
Chrysene	0.0313	0.00500	"	0.0333	93.8	30-120
Dibenz (a,h) anthracene	0.0270	0.00500	"	0.0333	81.0	30-120
Fluoranthene	0.0341	0.00500	"	0.0333	102	30-120
Fluorene	0.0342	0.00500	"	0.0333	103	30-120
Indeno (1,2,3-cd) pyrene	0.0302	0.00500	"	0.0333	90.7	30-120
Pyrene	0.0309	0.00500	"	0.0333	92.6	35-142
1-Methylnaphthalene	0.0277	0.00500	"	0.0333	83.0	35-142
2-Methylnaphthalene	0.0278	0.00500	"	0.0333	83.3	35-142

Surrogate: 2-Methylnaphthalene-d10	0.0309	"	0.0333	92.6	40-150
Surrogate: Fluoranthene-d10	0.0359	"	0.0333	108	40-150

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0456 - EPA 5030 Soil MS

Matrix Spike (BGA0456-MS1)

Source: 2301297-03

Prepared & Analyzed: 01/19/23

Acenaphthene	0.0239	0.00500	mg/kg	0.0333	ND	71.7	31-137				
Anthracene	0.0244	0.00500	"	0.0333	ND	73.2	30-120				
Benzo (a) anthracene	0.0224	0.00500	"	0.0333	ND	67.1	30-120				
Benzo (a) pyrene	0.0211	0.00500	"	0.0333	ND	63.3	30-120				
Benzo (b) fluoranthene	0.0223	0.00500	"	0.0333	ND	66.8	30-120				
Benzo (k) fluoranthene	0.0224	0.00500	"	0.0333	ND	67.2	30-120				
Chrysene	0.0223	0.00500	"	0.0333	ND	66.8	30-120				
Dibenz (a,h) anthracene	0.0203	0.00500	"	0.0333	ND	60.8	30-120				
Fluoranthene	0.0239	0.00500	"	0.0333	ND	71.8	30-120				
Fluorene	0.0242	0.00500	"	0.0333	ND	72.7	30-120				
Indeno (1,2,3-cd) pyrene	0.0222	0.00500	"	0.0333	ND	66.6	30-120				
Pyrene	0.0219	0.00500	"	0.0333	ND	65.7	35-142				
1-Methylnaphthalene	0.0235	0.00500	"	0.0333	ND	70.6	15-130				
2-Methylnaphthalene	0.0237	0.00500	"	0.0333	ND	71.1	15-130				
Surrogate: 2-Methylnaphthalene-d10	0.0243		"	0.0333		72.8	40-150				
Surrogate: Fluoranthene-d10	0.0245		"	0.0333		73.5	40-150				

Matrix Spike Dup (BGA0456-MSD1)

Source: 2301297-03

Prepared & Analyzed: 01/19/23

Acenaphthene	0.0261	0.00500	mg/kg	0.0333	ND	78.4	31-137	8.93	30		
Anthracene	0.0281	0.00500	"	0.0333	ND	84.3	30-120	14.1	30		
Benzo (a) anthracene	0.0256	0.00500	"	0.0333	ND	76.7	30-120	13.3	30		
Benzo (a) pyrene	0.0241	0.00500	"	0.0333	ND	72.2	30-120	13.1	30		
Benzo (b) fluoranthene	0.0249	0.00500	"	0.0333	ND	74.8	30-120	11.4	30		
Benzo (k) fluoranthene	0.0242	0.00500	"	0.0333	ND	72.5	30-120	7.50	30		
Chrysene	0.0248	0.00500	"	0.0333	ND	74.4	30-120	10.8	30		
Dibenz (a,h) anthracene	0.0227	0.00500	"	0.0333	ND	68.0	30-120	11.2	30		
Fluoranthene	0.0300	0.00500	"	0.0333	ND	89.9	30-120	22.4	30		
Fluorene	0.0282	0.00500	"	0.0333	ND	84.5	30-120	15.0	30		
Indeno (1,2,3-cd) pyrene	0.0252	0.00500	"	0.0333	ND	75.5	30-120	12.5	30		
Pyrene	0.0252	0.00500	"	0.0333	ND	75.5	35-142	13.8	30		
1-Methylnaphthalene	0.0280	0.00500	"	0.0333	ND	83.9	15-130	17.3	50		
2-Methylnaphthalene	0.0259	0.00500	"	0.0333	ND	77.8	15-130	9.03	50		
Surrogate: 2-Methylnaphthalene-d10	0.0277		"	0.0333		83.1	40-150				
Surrogate: Fluoranthene-d10	0.0296		"	0.0333		88.7	40-150				

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0476 - EPA 3050B

Blank (BGA0476-BLK1)

Prepared: 01/19/23 Analyzed: 01/21/23

Boron ND 0.0100 mg/L

LCS (BGA0476-BS1)

Prepared: 01/19/23 Analyzed: 01/21/23

Boron 4.93 0.0100 mg/L 5.00 98.7 80-120

Duplicate (BGA0476-DUP1)

Source: 2301323-01

Prepared: 01/19/23 Analyzed: 01/21/23

Boron 0.456 0.0100 mg/L 0.412 10.0 20

Matrix Spike (BGA0476-MS1)

Source: 2301323-01

Prepared: 01/19/23 Analyzed: 01/21/23

Boron 6.02 0.0100 mg/L 5.00 0.412 112 75-125

Matrix Spike Dup (BGA0476-MSD1)

Source: 2301323-01

Prepared: 01/19/23 Analyzed: 01/21/23

Boron 5.30 0.0100 mg/L 5.00 0.412 97.8 75-125 12.7 25

Summit Scientific

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PO Box 1289
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Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0487 - General Preparation

Blank (BGA0487-BLK1)

Prepared: 01/19/23 Analyzed: 01/20/23

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

LCS (BGA0487-BS1)

Prepared: 01/19/23 Analyzed: 01/20/23

Calcium	4.61	0.0500	mg/L wet	5.00	92.3	70-130
Magnesium	5.13	0.0500	"	5.00	103	70-130
Sodium	5.02	0.0500	"	5.00	100	70-130

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0495 - General Preparation

Duplicate (BGA0495-DUP1)

Source: 2301328-01

Prepared & Analyzed: 01/20/23

% Solids	85.3	%	88.1	3.29	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0505 - General Preparation

Blank (BGA0505-BLK1)

Prepared & Analyzed: 01/20/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

LCS (BGA0505-BS1)

Prepared & Analyzed: 01/20/23

Specific Conductance (EC) 0.148 0.0100 mmhos/cm 0.150 98.9 95-105

Duplicate (BGA0505-DUP1)

Source: 2301287-01

Prepared & Analyzed: 01/20/23

Specific Conductance (EC) 1.66 0.0100 mmhos/cm 1.67 0.780 20

Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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 BGA0504 - General Preparation

LCS (BGA0504-BS1)

Prepared & Analyzed: 01/20/23

pH	9.04	pH Units	9.18	98.5	95-105
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Duplicate (BGA0504-DUP1)

Source: 2301287-01

Prepared & Analyzed: 01/20/23

pH	7.76	pH Units	7.71	0.646	20
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Summit Scientific

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Fremont Environmental
PO Box 1289
Wellington CO, 80549

Project: Noble - Patriot Tank Battery

Project Number: [none]
Project Manager: Paul Henchan

Reported:
01/23/23 16:01

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