

# **FREMONT ENVIRONMENTAL INC.**

April 25, 2023

Mr. Daniel Peterson  
Noble Energy Inc.  
2115 117<sup>th</sup> 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.**



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)**



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

### Other Facility Equipment

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

Other observations regarding other facility or third party equipment:

### 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:	

## 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 Jumps Lines									
PID Readings									
Sample taken? Location/Sample ID#									
Photo Number(s)									
Other observations regarding partially buried vessels:									
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.  
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

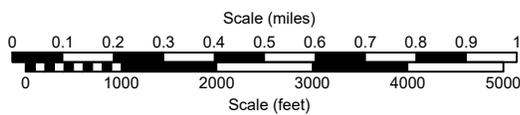
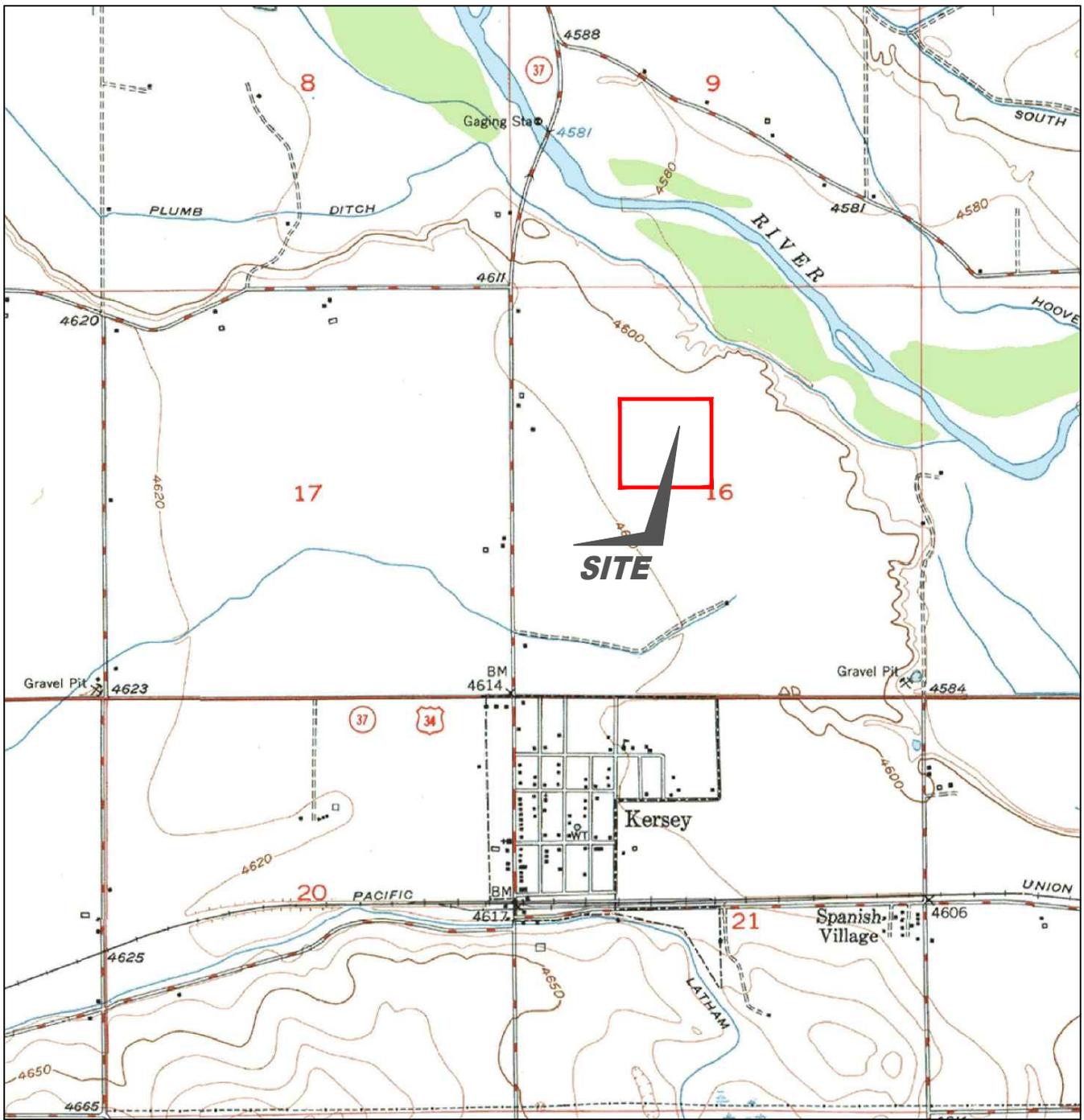
Sample ID	Sample Date	Depth (ft)	Acenaphthene (mg/kg)	Anthracene (mg/kg)	Benzo (a) Anthracene (mg/kg)	Benzo (a) Pyrene (mg/kg)	Benzo (b) Fluoranthene (mg/kg)	Benzo (k) Fluoranthene (mg/kg)	Chrysene (mg/kg)	Dibenzo (a,h) Anthracene (mg/kg)	Fluoranthene (mg/kg)	Fluorene (mg/kg)	Indeno (1,2,3-cd) Pyrene (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	<b>0.38</b>	<b>0.212</b>	<b>0.374</b>	0.119	0.349	<0.00500	0.515	0.174	0.143	0.534	<b>0.0248</b>	<b>0.0549</b>

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	<b>8.37</b>	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 # <b>CO23-036</b>	API #	Facility # <b>483056</b>
Date <b>08/14/2023</b>	Remediation # <b>25418</b>	Filename <b>23036T</b>





**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 # <b>CO23-036</b>	API #	Facility # <b>483056</b>
Date <b>08/14/2023</b>	Remediation # <b>25418</b>	Filename <b>23036Q</b>





**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

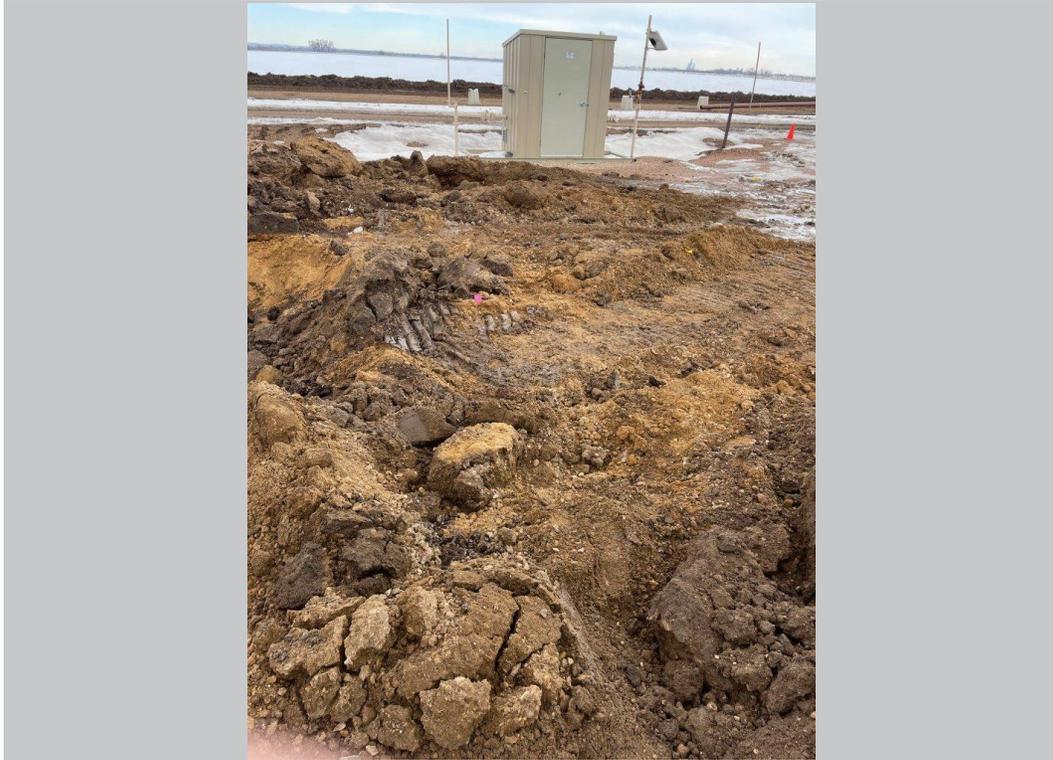
**Photo Log**



**Description:**

4 - Patriot B 65N64W W PWV excavation

**Photo Log**



**Description:**

5 - Patriot B 65N64W separator footprint

# Summit Scientific

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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,



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 Henchan

**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

S<sub>2</sub>

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

Page 1 of 1

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	HNO3	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 SFT																				
6	BKG SFT																				
7																					
8																					
9																					
10																					

Relinquished by: <i>EJH/Block</i>	Date/Time: 1/17/23 1600	Received by: <i>S2</i>	Date/Time: 1/17/23 1600	<b>Turn Around Time</b> (Check) Same Day _____ 72 hours 24 hours _____ Standard <input checked="" type="checkbox"/> 48 hours _____ <b>Sample Integrity:</b> Temperature Upon Receipt: <u>8.0</u> Samples Intact: <input checked="" type="radio"/> Yes No	Notes:
Relinquished by: <i>S2</i>	Date/Time: 1/17/23 1630	Received by: <i>[Signature]</i>	Date/Time: 1/17/23 1630		
Relinquished by:	Date/Time:	Received by:	Date/Time:		

S<sub>2</sub>

Sample Receipt Checklist

S2 Work Order# 2301329

Client: Fremont Client Project ID: Noble Patriot Tank Battery

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? <sup>(1)</sup> 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"/>	<u>on ICE</u>
If custody seals are present, are they intact? <sup>(1)</sup>	<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 <sup>2+</sup> ), Hexavalent Chromium (Cr <sup>6+</sup> , 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? <sup>(1)</sup>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Is the COC properly relinquished by the client w/ date and time recorded? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Were all samples received intact? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Was adequate sample volume provided? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Does the COC agree with the number and type of sample bottles received? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Do the sample IDs on the bottle labels match the COC? <sup>(1)</sup>	<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)? <sup>(1)</sup> Note the type of preservative in the comments column – HCl, H <sub>2</sub> SO <sub>4</sub> , NaOH, HNO <sub>3</sub> , etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
If samples are acid preserved for metals, is the pH ≤ 2? <sup>(1)</sup> 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):

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

[Signature]  
Custodian Printed Name

1-17-23 1430  
Date/Time



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
<b>Boron</b>	<b>0.0800</b>	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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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-N Surf**  
**2301329-01 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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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**

**Volatile Organic Compounds by EPA Method 8260B**

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

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

**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
<b>Boron</b>	<b>0.0750</b>	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**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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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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**

**Volatile Organic Compounds by EPA Method 8260B**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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
<b>Boron</b>	<b>0.0872</b>	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 1 Surf**  
**2301329-03 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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	

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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**

**Volatile Organic Compounds by EPA Method 8260B**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl	15.3	122 %	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 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
<b>Boron</b>	<b>0.129</b>	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**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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 Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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
<b>Boron</b>	<b>0.0808</b>	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**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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	

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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
<b>Boron</b>	<b>0.127</b>	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
<b>Calcium</b>	<b>9.97</b>	0.0535	mg/L dry	1	BGA0487	01/19/23	01/21/23	EPA 6020B	
<b>Magnesium</b>	<b>2.70</b>	0.0535	"	"	"	"	"	"	
<b>Sodium</b>	<b>3.35</b>	0.0535	"	"	"	"	"	"	

**Calculated Analysis**

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Sodium Adsorption Ratio</b>	<b>0.243</b>	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
<b>% Solids</b>	<b>93.5</b>		%	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
<b>Specific Conductance (EC)</b>	<b>0.546</b>	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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 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		Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	Units						
<b>pH</b>	<b>7.88</b>		pH Units	1	BGA0504	01/20/23	01/20/23	EPA 9045D	

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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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

#### 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			

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

**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			

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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**

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

**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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -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: <i>o</i> -Terphenyl	16.8		"	12.5		134		30-150			

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

**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	"							
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0265</i>		"	<i>0.0333</i>		<i>79.6</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0331</i>		"	<i>0.0333</i>		<i>99.4</i>		<i>40-150</i>		

**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		
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0309</i>		"	<i>0.0333</i>		<i>92.6</i>		<i>40-150</i>		
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0359</i>		"	<i>0.0333</i>		<i>108</i>		<i>40-150</i>		

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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		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**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			
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0243</i>		<i>"</i>	<i>0.0333</i>		<i>72.8</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0245</i>		<i>"</i>	<i>0.0333</i>		<i>73.5</i>	<i>40-150</i>			

**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	
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0277</i>		<i>"</i>	<i>0.0333</i>		<i>83.1</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0296</i>		<i>"</i>	<i>0.0333</i>		<i>88.7</i>	<i>40-150</i>			

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

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

**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 Result	%REC		RPD		Notes
		Limit	Units			Limit	RPD	Limit	RPD	

**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		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

**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	Source	%REC		RPD		Notes
		Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

**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