

# **FREMONT ENVIRONMENTAL INC.**

February 03, 2023

Mr. Daniel Peterson  
Noble Energy Inc.  
2115 117<sup>th</sup> Avenue  
Greeley, CO 80634

Subject:           **Facility Closure Data Submittal**  
Balboa Tank Battery  
API # 05-123-24191  
NESE Sec. 20, T4N, R64W  
Weld County, Colorado  
Fremont Project No. C023-022  
Facility # 450395, Remediation #24048

Dear Mr. Peterson:

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

Please contact me at (303) 956-8714 if you require any additional information. Fremont appreciates the opportunity to provide this service.

Sincerely,

**FREMONT ENVIRONMENTAL INC.**



Paul V. Henehan, P.E.  
Senior Consultant

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	<b>X</b>	Partially Buried Vault Closure	
Site Name & COGCC Facility Number: Balboa Tank Battery Facility ID: 450395		Date: 01/26/2023						Remediation Project #: 24048	
Associated Wells: Balboa C 20-23 API: 05-123-24191 Balboa C 20-9X Facility ID: 286455 API: 05-123-24194 Facility ID: 286452		Age of Site: 2007						Number of Photos Attached: 5 Photos	
Location: (GPS coordinates of southeaster berm) 40.295933, -104.565613							Estimated Facility Size (acres): ~1 Acre		

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)  
**Good housekeeping. General condition for all the on-site equipment looked fine. Waste management well maintained.**

USCS Soil Type: **Sandy Clay**      Estimated Depth to Groundwater: **N/A**

Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
**None observed**

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
**None observed**

#### Tanks

Tank Contents	Oil							
Size (barrels)	300 BBLs							
Age	2007							
Construction Material	Steel							
Tank type (AST/DRV, etc.)	AST							
Visual Integrity of Tank	No Damage							
Condition of tank footprint	No Impacts							
PID Readings	High @ 0.0ppm							
Soil impacts present at valves or hatches?	No Impacts Noted							
PID Readings	N/A							
Sample taken? Location/ Sample ID#	40.296085, -104.565460 AST01 @ 6.0"							
Photo Number(s)	Photo 1A							

Other observations regarding tanks:  
 Tank removed prior to sampling event. An exceedance in pH (5.94) was discovered at the above ground storage tank. Refer to the inorganic soil chemistry table (Table 3) for reference.

#### Separators

Separator size	UNK							
Vertical or Horizontal	Horizontal							
Age	2007							
Soil impacts	No Impacts							
PID Readings	High @ 0.0ppm							
Sample taken? Location/ Sample ID#	40.296056, -104.565719 SEP01 @ 4.5'							
Photo Number(s)	Photo 3A							

Other observations regarding separators  
**Separator removed prior to sampling event**

#### Third Party Equipment

Type								
Age								

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

### Other Facility Equipment

Equipment type	Combustion Unit	Combustion Unit		
Equipment Condition	No Damage	No Damage		
Age	2007	2007		
Soil impacts	No Impacts	No Impacts		
PID Readings	High @ 0.0ppm	High @ 0.0ppm		
Sample taken? Location/ Sample	ECD01@6.0"	ECD02@6.0"		
Photo Number(s)	Photo 5A	Photo 6A		

Other observations regarding other facility or third party equipment:

Combustion units removed prior to sampling event

### Summary

Was impacted soil identified?	
<b>No</b>	Yes - less than 10 cubic yards      Yes - more than 10 cubic yards
Total number of samples field screened: <b>2 Samples</b>	Total number of samples collected: <b>5 Samples</b>
Highest PID Reading: High at 0.0ppm (All Samples Collected)	Total number of samples submitted to lab for analysis: <b>3 Samples</b>
If more than 10 cubic yards of impacted soil were observed:	
Vertical extent: <b>N/A</b>	Estimated spill volume: <b>N/A</b>
Lateral extent: <b>N/A</b>	Volume of soil removed: <b>N/A</b>
Is additional investigation required? <b>N/A</b>	
Was groundwater encountered during the investigation?	
<b>No</b>	Yes - not impacted or in contact with impacted soils      Yes - groundwater impacted and/or in contact with impacted soils
Measured depth to groundwater: <b>N/A</b>	Was remedial groundwater removal conducted?      Yes      No
Date Groundwater was encountered: <b>N/A</b>	Commencement date of removal: <b>N/A</b>
Sheen on groundwater?      Yes      No	Volume of groundwater removed prior to sampling: <b>N/A</b>
Free product observed?      Yes      No	Volume of groundwater removed post sampling: <b>N/A</b>
Total number of samples collected: <b>N/A</b>	Total Volume of groundwater removed: <b>N/A</b>
Total number of samples submitted to lab for analysis: <b>N/A</b>	

## 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	X	Tank Battery Closure	
Site Name & COGCC Facility Number: Balboa Tank Battery Facility ID: 450395		Date: 01/26/2023						Remediation Project #: 24048	
Associated Wells: Balboa C 20-23 Balboa C 20-9X API: 05-123-24191 Facility ID: 286455 API: 05-123-24194 Facility ID: 286452		Age of Site: 2007						Number of Photos Attached: 6 Photos	
Location: (GPS coordinates of vault or southeastern tank berm for multiple) 40.296090, -104.565502							Estimated Facility Size (acres): ~1 acre		

General Condition of Site: (General observations regarding housekeeping, corrosion, waste management, etc.)  
**Good housekeeping. General condition for all the on-site equipment looked fine. Waste management well maintained.**

USCS Soil Type: <b>Sandy Clay</b>	Estimated Depth to Groundwater: <b>N/A</b>
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Hydrocarbon Impacted Soils / Spills: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
 Exceedances in 1-Methyl-Naphthalene (0.0106mg/kg) and 2-Methyl-Naphthalene (0.0191mg/kg) were discovered at the floor of the produced water vault (PWV) excavation. Refer to the Polycyclic Aromatic Hydrocarbon Soil Chemistry Data Table (Table 2) for reference. Impacts were left in place and additional investigation is required. An exceedance in pH (8.45) was discovered at the floor of the PWV excavation as well. Refer to the inorganic soil chemistry table (Table 3) for reference.

Salt Crusted Soils or Impacted Vegetation: (Note estimated size and if impact appears to be surficial or extends to an unknown depth)  
**None observed**

### Buried or Partially Buried Vessels

Tank Contents	Produced Water							
Size (barrels)	<100 BBLs							
Age	2007							
Construction Material	PBV Concrete							
Visual Integrity of Tank	No Damage							
Condition of tank contents	Staining/Odor							
PID Readings	High @ 29.8ppm							
Condition of Dimple Line	No Damage							
PID Readings	High @ 0.0ppm DL01@3.5'							
Sample taken? Location/Sample ID#	PWVB01@5.0' PWVS01@4.0'							
Photo Number(s)	Photo 2A-2E & 4A							

Other observations regarding partially buried vessels:  
 The southern sidewall of PWV excavation was the tie-in point for the dumpline. Dumpline was not trenched.

### Summary

Was impacted soil identified? No	Yes - less than 10 cubic yards	Yes - more than 10 cubic yards
Total number of samples field screened: <b>4 samples</b>	Total number of samples collected: <b>6 samples</b>	
Highest PID Reading: <b>High @ 29.8ppm (PWVB01@5.0')</b>	Total number of samples submitted to lab for analysis: <b>2 samples</b>	
If more than 10 cubic yards of impacted soil were observed:		
Vertical extent: <b>N/A</b>	Estimated spill volume: <b>N/A</b>	
Lateral extent: <b>N/A</b>	Volume of soil removed: <b>N/A</b>	
Is additional investigation required? <b>No</b>		
Was groundwater encountered during the investigation? <b>No</b> Yes - not impacted or in contact with impacted soils    Yes - groundwater impacted and/or in contact with impacted soils		
Measured depth to groundwater: <b>N/A</b>	Was remedial groundwater removal conducted?    Yes    No	
Date Groundwater was encountered: <b>N/A</b>	Commencement date of removal: <b>N/A</b>	
Sheen on groundwater?    Yes    No	Volume of groundwater removed prior to sampling: <b>N/A</b>	
Free product observed?    Yes    No	Volume of groundwater removed post sampling: <b>N/A</b>	
Total number of samples collected: <b>N/A</b>	Total Volume of groundwater removed: <b>N/A</b>	
Total number of samples submitted to lab for analysis: <b>N/A</b>		

**TABLE 1**  
**SUMMARY OF VOLATILE ORGANIC SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**BALBOA TANK BATTERY, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-022**

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		
AST01@6.0"	1/26/2023	0.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWVB01@5.0'	1/26/2023	5.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
PWVS01@4.0'	1/26/2023	4.0 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<0.50	<50	<50
SEP01@4.5'	1/26/2023	4.5 Ft	<0.0020	<0.0050	<0.0050	<0.010	<0.0050	<0.0050	<0.0038	<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 3**  
**SUMMARY OF SOIL SUITABILITY FOR RECLAMATION**  
**NOBLE ENERGY INC.**  
**BALBOA TANK BATTERY, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-022**

Sample ID	Sample Date	Depth (ft)	pH	EC (mmhos/cm)	SAR	Boron (mg/L)
COGCC Table 915-1 Soil Suitability Limits			6 - 8.3	<4	<6	2
AST01@6.0"	1/26/2023	0.5 Ft	<b>5.94</b>	0.102	0.00512	0.0696
PWVB01@5.0'	1/26/2023	5.0 Ft	<b>8.45</b>	1.08	1.46	0.800
PWVS01@4.0'	1/26/2023	4.0 Ft	7.77	0.481	0.270	0.420
SEP01@4.5'	1/26/2023	4.5 Ft	7.35	0.168	0.213	0.0504
BKG01@6.0"	1/26/2023	0.5 Ft	6.48	0.481	0.154	0.177

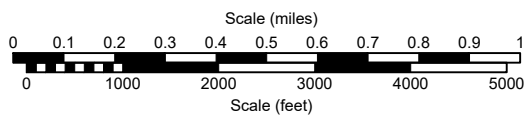
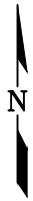
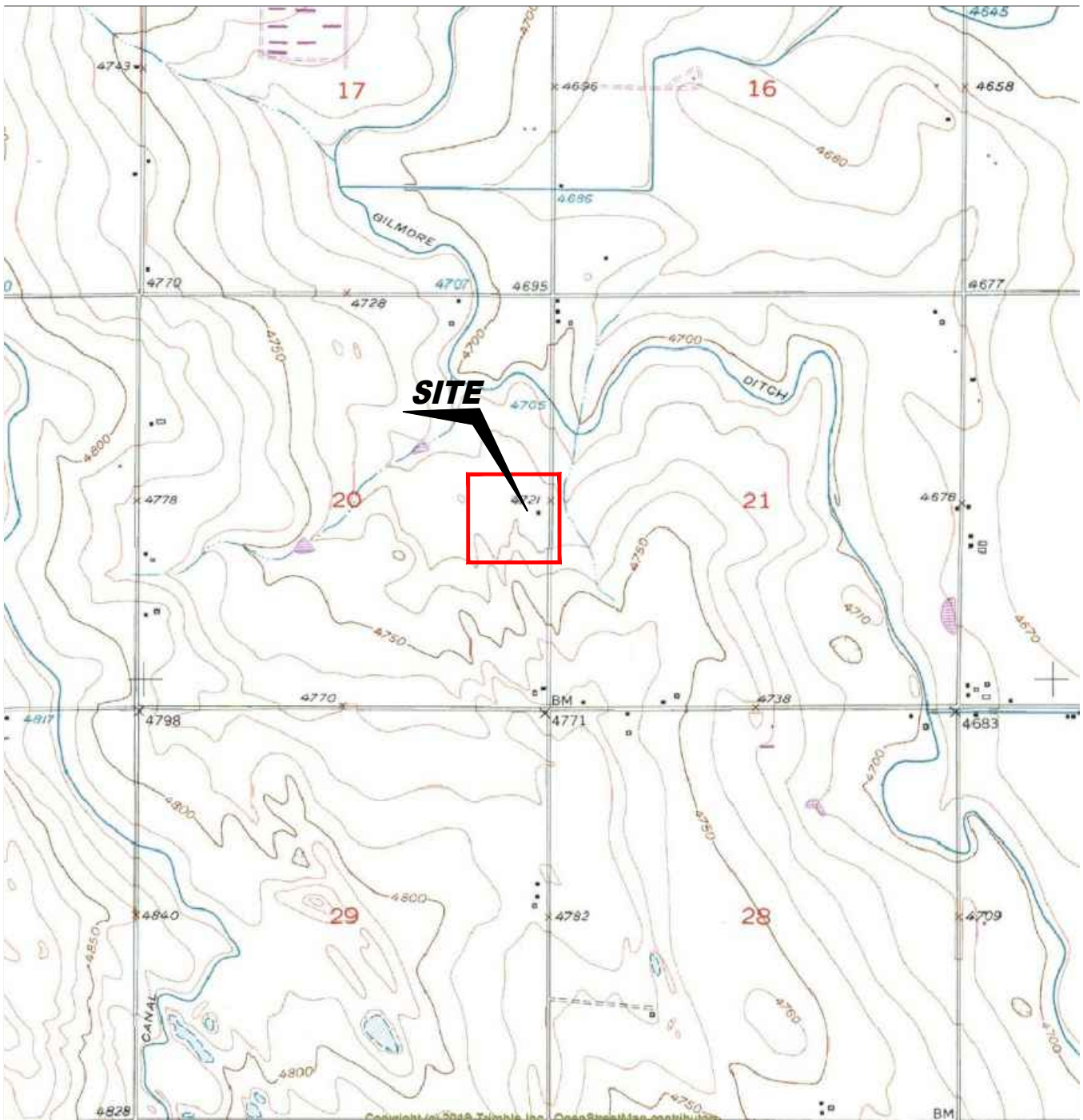
Bold faced values exceed the COGCC Table 915-1 concentrations

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

**TABLE 4**  
**SUMMARY OF METALS IN SOIL CHEMISTRY DATA**  
**NOBLE ENERGY INC.**  
**BALBOA TANK BATTERY, WELD COUNTY, COLORADO**  
**FREMONT PROJECT NO. C023-022**

Sample ID	Sample Date	Depth (ft)	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (VI) (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Nickel (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Zinc (mg/kg)
COGCC Table 915-1 Limits (Residential SSL)			0.68	15000	71	0.3	3100	400	1500	390	390	23000
COGCC Table 915-1 Limits (Protection of Groundwater SSL)			0.29	82	0.38	0.00067	46	14	26	0.26	0.8	370
BKG01@6.0"	1/26/2023	0.5 Ft	<b>1.52</b>	32.3	0.135	<0.30	3.01	4.69	2.87	<0.260	0.0236	11.2

Bold faced values exceed the COGCC Table 915-1 concentrations  
 Red & blue highlighted 915-1 Limits indicate the referenced soil screening level (SSL)  
 NA - Not analyzed



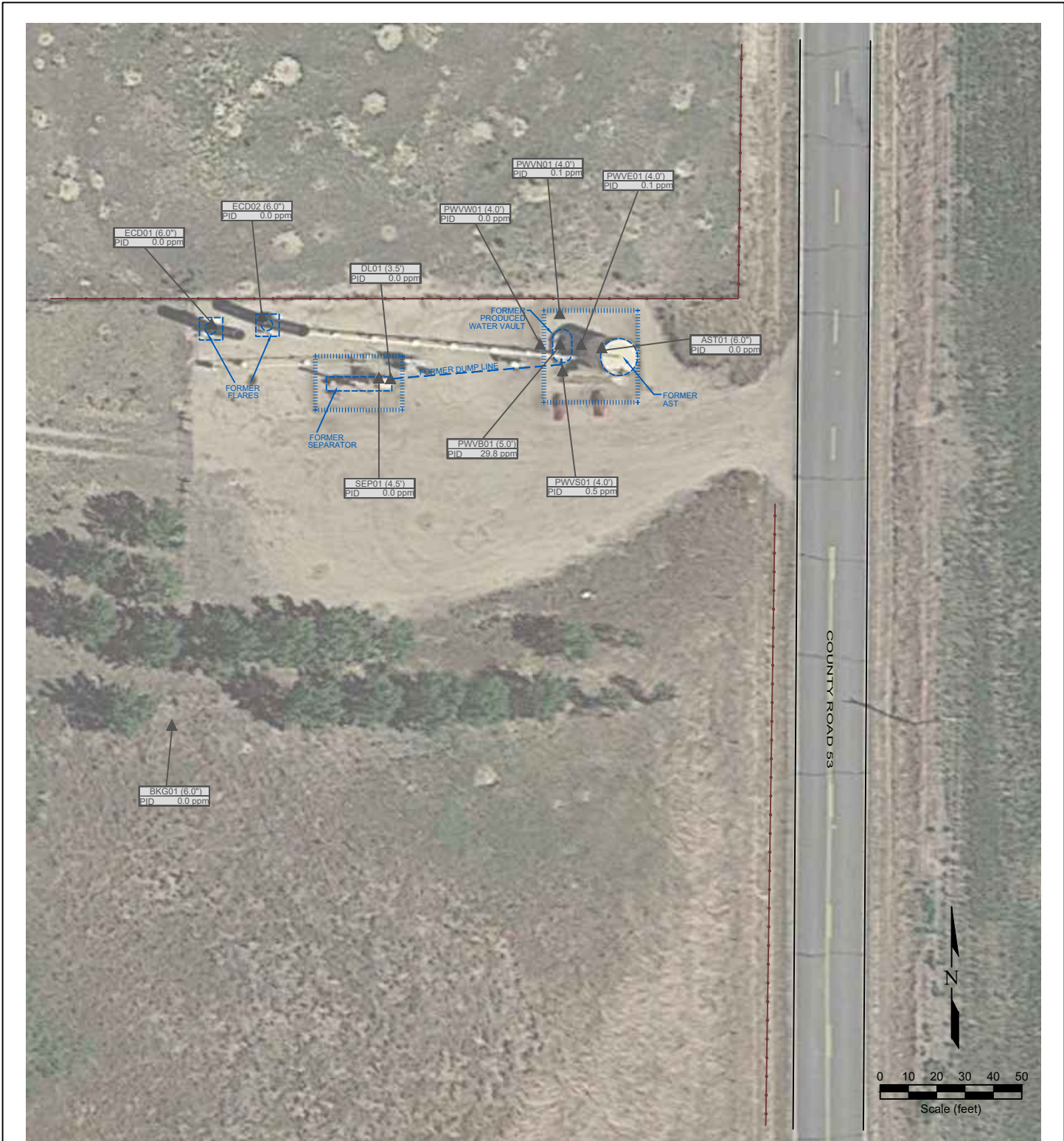
USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)

Figure 1  
SITE LOCATION MAP

**Noble Energy, Inc. ~ Balboa Tank Battery**  
 NESE Sec. 20, T4N, R64W, 6th PM  
 Weld County, Colorado  
 40.295933°, -104.565613°

Project # <b>C023-022</b>	Facility # <b>450395</b>	Remediation # <b>24048</b>
Date <b>02/03/23</b>	Reviewed By <b>EB</b>	Filename <b>23022T</b>





**LEGEND**

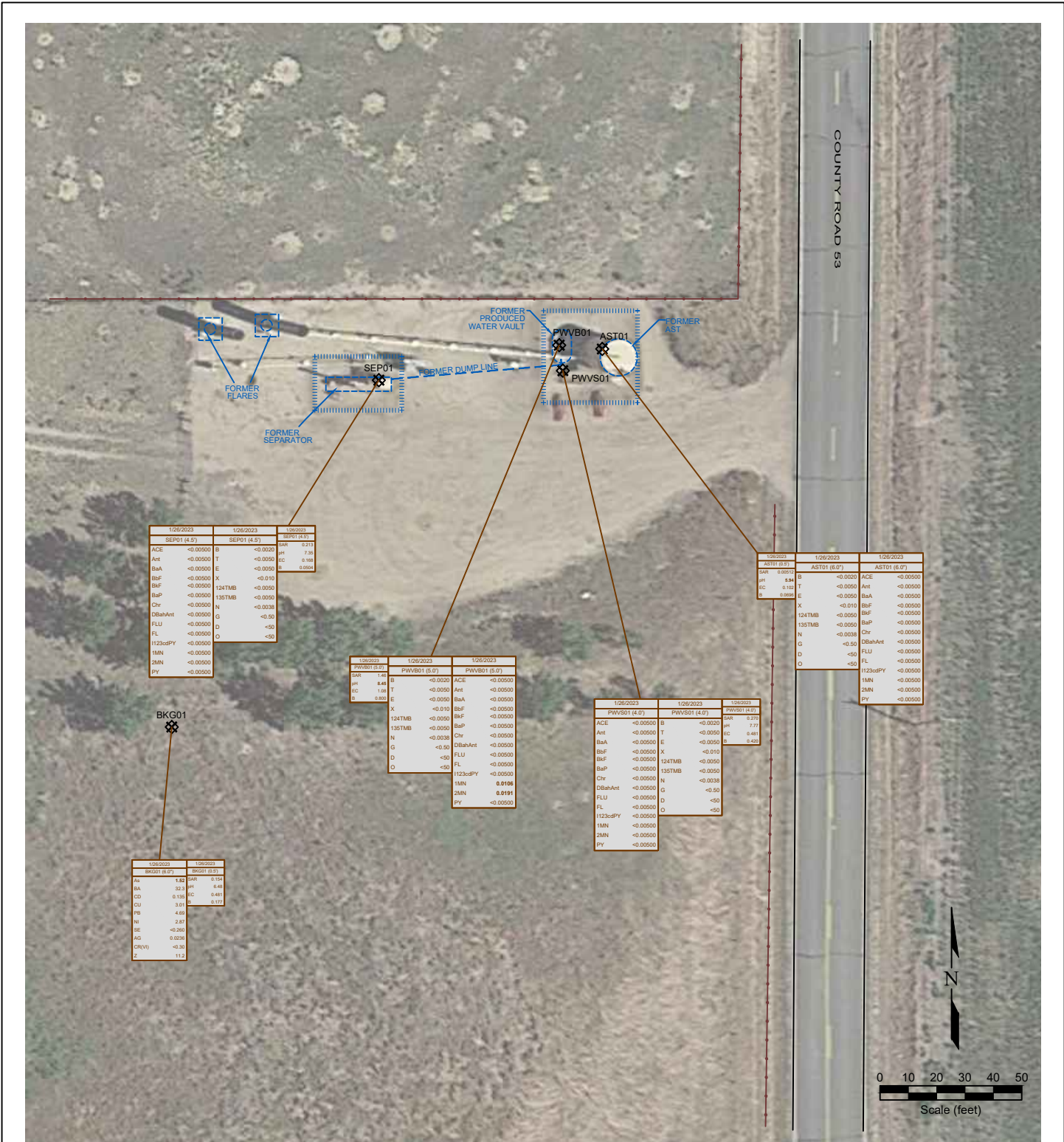
- ▲ PID READING LOCATION
- ABOVE GROUND STORAGE TANK
- FORMER FACILITY
- ▬ CONTAINMENT WALL
- ▬ FENCE LINE
- ▬ DUMP LINE
- ▬ PID READING LOCATION IDENTIFICATION
- ▬ PHOTO IONIZATION DETECTION (ppm)

**Figure 2  
SITE MAP**

**Noble Energy, Inc. ~ Balboa Tank Battery**  
 NESE Sec. 20, T4N, R64W, 6th PM  
 Weld County, Colorado  
 40.295933°, -104.565613°

Project No. <b>C023-022</b>	Facility # <b>450395</b>	Remediation # <b>24048</b>
Date <b>02/03/23</b>	Reviewed By <b>EB</b>	Filename <b>23022Q</b>





**LEGEND**

Soil Sample Location (X) Above Ground Storage Tank (O) Former Facility (Dashed Box) Containment Wall (Dashed Line) Fence Line (Dotted Line) Dump Line (Dashed Line)

**Table 1: 1/26/2023 DATE SAMPLED**

1/26/2023	1/26/2023
AST01 (6.0')	AST01 (6.0')
ACE <-0.0050	BENZENE (mg/kg)
ACENAPHTHENE (mg/kg)	TOLUENE (mg/kg)
ANTHRACENE (mg/kg)	ETHYLBENZENE (mg/kg)
BENZO (A) ANTHRACENE (mg/kg)	TOTAL XYLENES (mg/kg)
BENZO (B) FLUORANTHENE (mg/kg)	1,2,4-TRIMETHYLBENZENE (mg/kg)
BENZO (K) FLUORANTHENE (mg/kg)	1,3,5-TRIMETHYLBENZENE (mg/kg)
BENZO (A) PYRENE (mg/kg)	NAPHTHALENE (mg/kg)
CHRYSENE (mg/kg)	TPH-GRO (mg/kg)
DIBENZ (A,H) ANTHRACENE (mg/kg)	TPH-GRO (mg/kg)
FLUORANTHENE (mg/kg)	
FLUORENE (mg/kg)	
INDENO (1,2,3-CD) PYRENE (mg/kg)	
1-METHYLNAPHTHALENE (mg/kg)	
2-METHYLNAPHTHALENE (mg/kg)	
PYRENE (mg/kg)	

**Table 2: 1/26/2023 DATE SAMPLED**

1/26/2023	1/26/2023
PWVB01 (3.0')	PWVB01 (3.0')
SAR 1.46	ARSENIC (mg/kg)
pH 8.48	BARIUM (mg/kg)
EC 1.68	COPPER (mg/kg)
S 0.803	LEAD (mg/kg)
	NICKEL (mg/kg)
	SELENIUM (mg/kg)
	SILVER (mg/kg)
	HEXAVALENT CHROMIUM (mg/kg)
	ZINC (mg/kg)

**Table 3: 1/26/2023 DATE SAMPLED**

1/26/2023	1/26/2023
BKG01 (6.0')	BKG01 (6.0')
SAR 0.154	DATE SAMPLED
pH 6.40	SAMPLE ID & DEPTH (ft)
EC 1.481	
S 0.172	

**Figure 3**  
**SOIL CHEMISTRY MAP**

**Noble Energy, Inc. ~ Balboa Tank Battery**  
NESE Sec. 20, T4N, R64W, 6th PM  
Weld County, Colorado  
40.295933°, -104.565613°

Project No. <b>C023-022</b>	Facility # <b>450395</b>	Remediation # <b>24048</b>
Date <b>02/03/23</b>	Reviewed By <b>EB</b>	Filename <b>23022Q</b>

**REMONT ENVIRONMENTAL**



***Description:***

# Photo Log



*Description:*

# Photo Log



*Description:*

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# Photo Log



*Description:*

# Photo Log



*Description:*

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# Photo Log



*Description:*

# Photo Log



*Description:*

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# Photo Log



***Description:***

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# Photo Log



*Description:*

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# Photo Log



***Description:***

# Photo Log



*Description:*

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# Summit Scientific

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4653 Table Mountain Drive, Golden, Colorado 80401

303.277.9310

February 02, 2023

Paul Henehan

Fremont Environmental

PO Box 1289

Wellington, CO 80549

RE: Noble - Balboa Tank Battery

Work Order # 2301479

Enclosed are the results of analyses for samples received by Summit Scientific on 01/26/23 13:55. 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 - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
02/02/23 14:17

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AST01@6.0'	2301479-01	Soil	01/26/23 00:00	01/26/23 13:55
PWVB01@5.0'	2301479-02	Soil	01/26/23 00:00	01/26/23 13:55
PWVS01@4.0'	2301479-03	Soil	01/26/23 00:00	01/26/23 13:55
SEP01@4.5'	2301479-04	Soil	01/26/23 00:00	01/26/23 13:55
BKG01@6.0'	2301479-05	Soil	01/26/23 00:00	01/26/23 13:55

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

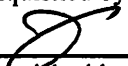
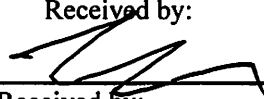
4653 Table Mountain Drive  
Golden, CO 80403  
303-277-9310

230/479

Lab ID	Page 1 of 3
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Client: <b>Fremont Env</b>	Send Data To: Project Manager: <b>Paul Henchan</b>	Send Invoice To: Company: <b>Noble</b>
Address:	E-Mail: <b>Paul.h@fremontenv.com</b>	Project Name/Location:
City/State/Zip:	<b>jeffg@fremontenv.com</b> <b>Ethanb@fremontenv.com</b>	AFE#:
Phone:	Project Name: <b>Balboa Tank Battery</b>	PO/Billing Codes:
Sampler Name: <b>JG</b>	Project Number:	Contact:

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+N	TMBs (915)	GR0,OR0,PR0	PAHs (915)		PC,PH,SAR BACON
1	AST01 @ 6.0'	01/26/23		2			X			X			X	X	X	X	X	No Metals
2	PWV01 @ 5.0'	↓		1			↓			↓			↓	↓	↓	↓	↓	No Metals
3	PWV01 @ 4.0'	↓		1			↓			↓			↓	↓	↓	↓	↓	No Metals
4	SEPO1 @ 4.5'	↓		2			↓			↓			↓	↓	↓	↓	↓	No Metals
5	BKG01 @ 6.0'	↓		1			↓			↓			↓	↓	↓	↓	↓	
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

Relinquished by: 	Date/Time: 01/26/23	Received by: 	Date/Time: 1-26-23 1:55 PM	TAT Business Days	Field DO	Notes:  Bill to Noble
Relinquished by:	Date/Time:	Received by:	Date/Time:	Same Day	Field EC	
Relinquished by:	Date/Time:	Received by:	Date/Time:	1 Day	Field ORP	
Relinquished by:	Date/Time:	Received by:	Date/Time:	2 Days	Field pH	
Relinquished by:	Date/Time:	Received by:	Date/Time:	3 Days	Field Temp.	
Temperature Upon Receipt: 6.8 °C	Corrected Temperature:	IR gun #: 02	HNO3 lot #:	Standard	X Field Turb.	

# S<sub>2</sub>

## Sample Receipt Checklist

S2 Work Order# 2301479Client: Fremont Env Client Project ID: Balboa Tank BatteryShipped Via: H.D./P.U./FedEx/UPS/USPS/Other  Airbill #: \_\_\_\_\_  
    Matrix (Check all that apply) Air  Soil/Solid  Water  Other Temp (°C) 6.8 Thermometer # 0.2

	Yes	No	N/A	Comments (if any)
If samples require cooling, is the temperature < 6°C? <sup>(1)</sup> <b>NOTE:</b> 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"/>	
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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Is a chain-of-custody (COC) form present and filled out Completely? <sup>(1)</sup>	<input checked="" type="checkbox"/>	<input 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 type="checkbox"/>	
For volatiles in water – is there headspace present? <b>If yes, contact client and note in narrative.</b>	<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.

Gavan Stonehouse  
Custodian Printed Name

12/23 2:13 PM  
Date/Time



Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
02/02/23 14:17

**AST01@6.0"**  
**2301479-01 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGA0714	01/30/23	01/30/23	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: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		94.3 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		96.1 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		104 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0715	01/30/23	01/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		87.6 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**AST01@6.0"**  
**2301479-01 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGA0686	01/27/23	01/28/23	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: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		56.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		68.0 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0696</b>	0.0100		mg/L	1	BGA0766	01/31/23	02/01/23	EPA 6020B	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**AST01@6.0"**  
**2301479-01 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	83.4	0.0530		mg/L dry	1	BGA0677	01/27/23	01/30/23	EPA 6020B	
Magnesium	16.9	0.0530		"	"	"	"	"	"	
Sodium	0.196	0.0530		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.00512	0.00100		units	1	BGA0753	01/31/23	01/31/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	94.3			%	1	BGA0733	01/30/23	01/30/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.102	0.0100		mmhos/cm	1	BGA0701	01/28/23	01/28/23	EPA 120.1	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	5.94			pH Units	1	BGA0702	01/28/23	01/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
02/02/23 14:17

**PWVB01@5.0'**  
**2301479-02 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGA0714	01/30/23	01/30/23	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: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		97.6 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		98.8 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		108 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0715	01/30/23	01/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		88.0 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
02/02/23 14:17

**PWVB01@5.0'**  
**2301479-02 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGA0686	01/27/23	01/31/23	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		"	"	"	"	"	"	
<b>1-Methylnaphthalene</b>	<b>0.0106</b>	0.00500		"	"	"	"	"	"	
<b>2-Methylnaphthalene</b>	<b>0.0191</b>	0.00500		"	"	"	"	"	"	

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		52.1 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		42.3 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.800</b>	0.0100		mg/L	1	BGA0766	01/31/23	02/01/23	EPA 6020B	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	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 - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**PWVB01@5.0'**  
**2301479-02 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1140	0.0618		mg/L dry	1	BGA0677	01/27/23	01/30/23	EPA 6020B	
Magnesium	193	0.0618		"	"	"	"	"	"	
Sodium	203	0.0618		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.46	0.00100		units	1	BGA0753	01/31/23	01/31/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	81.0			%	1	BGA0733	01/30/23	01/30/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	1.08	0.0100		mmhos/cm	1	BGA0701	01/28/23	01/28/23	EPA 120.1	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	8.45			pH Units	1	BGA0702	01/28/23	01/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
02/02/23 14:17

**PWVS01@4.0'**  
**2301479-03 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020		mg/kg	1	BGA0714	01/30/23	01/30/23	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: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		95.0 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		96.7 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		105 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0715	01/30/23	01/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: o-Terphenyl		87.6 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**PWVS01@4.0'**  
**2301479-03 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Acenaphthene	ND	0.00500		mg/kg	1	BGA0686	01/27/23	01/28/23	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: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 2-Methylnaphthalene-d10		59.5 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		67.6 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.420</b>	0.0100		mg/L	1	BGA0766	01/31/23	02/01/23	EPA 6020B	

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

Date Sampled: **01/26/23 00:00**

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

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
02/02/23 14:17

**PWVS01@4.0'**  
**2301479-03 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1180	0.0582		mg/L dry	1	BGA0677	01/27/23	01/30/23	EPA 6020B	
Magnesium	104	0.0582		"	"	"	"	"	"	
Sodium	36.0	0.0582		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.270	0.00100		units	1	BGA0753	01/31/23	01/31/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	86.0			%	1	BGA0733	01/30/23	01/30/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.481	0.0100		mmhos/cm	1	BGA0701	01/28/23	01/28/23	EPA 120.1	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.77			pH Units	1	BGA0702	01/28/23	01/28/23	EPA 9045D	

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
02/02/23 14:17

**SEP01@4.5'**  
**2301479-04 (Soil)**

**Summit Scientific**

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Benzene	ND	0.0020		mg/kg	1	BGA0714	01/30/23	01/30/23	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: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: 1,2-Dichloroethane-d4		103 %		50-150		"	"	"	"	
Surrogate: Toluene-d8		99.9 %		50-150		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		109 %		50-150		"	"	"	"	

**Extractable Petroleum Hydrocarbons by 8015**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
C10-C28 (DRO)	ND	50		mg/kg	1	BGA0715	01/30/23	01/30/23	EPA 8015M	
C28-C36 (ORO)	ND	50		"	"	"	"	"	"	

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Surrogate: o-Terphenyl		86.2 %		30-150		"	"	"	"	

**PAH by EPA Method 8270D SIM**

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
02/02/23 14:17

**SEP01@4.5'**  
**2301479-04 (Soil)**

**Summit Scientific**

**PAH by EPA Method 8270D SIM**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Acenaphthene	ND	0.00500		mg/kg	1	BGA0686	01/27/23	01/28/23	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: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 2-Methylnaphthalene-d10		50.2 %		40-150		"	"	"	"	
Surrogate: Fluoranthene-d10		65.4 %		40-150		"	"	"	"	

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>Boron</b>	<b>0.0504</b>	0.0100		mg/L	1	BGA0766	01/31/23	02/01/23	EPA 6020B	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**SEP01@4.5'**  
**2301479-04 (Soil)**

**Summit Scientific**

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

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	90.3	0.0524		mg/L dry	1	BGA0677	01/27/23	01/30/23	EPA 6020B	
Magnesium	21.4	0.0524		"	"	"	"	"	"	
Sodium	8.67	0.0524		"	"	"	"	"	"	

**Calculated Analysis**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	0.213	0.00100		units	1	BGA0753	01/31/23	01/31/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	95.3			%	1	BGA0733	01/30/23	01/30/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.168	0.0100		mmhos/cm	1	BGA0701	01/28/23	01/28/23	EPA 120.1	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.35			pH Units	1	BGA0702	01/28/23	01/28/23	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
02/02/23 14:17

**BKG01@6.0"**  
**2301479-05 (Soil)**

**Summit Scientific**

**Total Metals by EPA 6020B Hot Water Soluble Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Boron</b>	<b>0.177</b>	0.0100		mg/L	1	BGA0766	01/31/23	02/01/23	EPA 6020B	

**Total Metals by EPA 6020B**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Arsenic</b>	<b>1.52</b>	0.215	0.181	mg/kg dry	1	BGA0675	01/27/23	01/28/23	EPA 6020B	
<b>Barium</b>	<b>32.3</b>	0.430	0.339	"	"	"	"	"	"	
<b>Cadmium</b>	<b>0.135</b>	0.215	0.00773	"	"	"	"	"	"	
<b>Copper</b>	<b>3.01</b>	0.430	0.0225	"	"	"	"	"	"	
<b>Lead</b>	<b>4.69</b>	0.215	0.0590	"	"	"	"	"	"	
<b>Nickel</b>	<b>2.87</b>	0.430	0.0655	"	"	"	"	"	"	
Selenium	ND	0.260	0.175	"	"	"	"	"	"	
<b>Silver</b>	<b>0.0236</b>	0.0215	0.00287	"	"	"	"	"	"	
<b>Zinc</b>	<b>11.2</b>	0.430	0.286	"	"	"	"	"	"	

**Hexavalent Chromium by EPA Method 7196**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
Chromium, Hexavalent	ND	0.30		mg/kg dry	1	BGA0690	01/27/23	01/27/23	EPA 7196A	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit	MDL							
<b>Calcium</b>	<b>38.0</b>	0.0537		mg/L dry	1	BGA0677	01/27/23	01/30/23	EPA 6020B	
<b>Magnesium</b>	<b>14.1</b>	0.0537		"	"	"	"	"	"	
<b>Sodium</b>	<b>4.38</b>	0.0537		"	"	"	"	"	"	

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**BKG01@6.0"**  
**2301479-05 (Soil)**

**Summit Scientific**

**Calculated Analysis**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	<b>0.154</b>	0.00100		units	1	BGA0753	01/31/23	01/31/23	Calculation	

**Physical Parameters by APHA/ASTM/EPA Methods**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	<b>93.1</b>			%	1	BGA0733	01/30/23	01/30/23	Calculation	

**Specific Conductance by EPA Method 120.1, Saturated Paste Extraction**

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	<b>0.481</b>	0.0100		mmhos/cm	1	BGA0701	01/28/23	01/28/23	EPA 120.1	

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

Date Sampled: **01/26/23 00:00**

Analyte	Result	Reporting Limit	MDL	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	<b>6.48</b>			pH Units	1	BGA0702	01/28/23	01/28/23	EPA 9045D	

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
02/02/23 14:17

### 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 BGA0714 - EPA 5030 Soil MS

##### Blank (BGA0714-BLK1)

Prepared & Analyzed: 01/30/23

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	0.0583		"	0.0400		146	50-150			
Surrogate: Toluene-d8	0.0587		"	0.0400		147	50-150			
Surrogate: 4-Bromofluorobenzene	0.0562		"	0.0400		140	50-150			

##### LCS (BGA0714-BS1)

Prepared & Analyzed: 01/30/23

Benzene	0.115	0.0020	mg/kg	0.125		92.2	70-130			
Toluene	0.144	0.0050	"	0.125		115	70-130			
Ethylbenzene	0.108	0.0050	"	0.125		86.0	70-130			
m,p-Xylene	0.261	0.010	"	0.250		104	70-130			
o-Xylene	0.123	0.0050	"	0.125		98.6	70-130			
1,2,4-Trimethylbenzene	0.144	0.0050	"	0.125		115	70-130			
1,3,5-Trimethylbenzene	0.148	0.0050	"	0.125		119	70-130			
Naphthalene	0.0961	0.0038	"	0.125		76.8	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0500		"	0.0400		125	50-150			
Surrogate: Toluene-d8	0.0324		"	0.0400		81.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0509		"	0.0400		127	50-150			

##### Matrix Spike (BGA0714-MS1)

Source: 2301479-01

Prepared & Analyzed: 01/30/23

Benzene	0.114	0.0020	mg/kg	0.125	ND	91.0	70-130			
Toluene	0.111	0.0050	"	0.125	ND	89.1	70-130			
Ethylbenzene	0.102	0.0050	"	0.125	ND	81.2	70-130			
m,p-Xylene	0.201	0.010	"	0.250	ND	80.4	70-130			
o-Xylene	0.0962	0.0050	"	0.125	ND	77.0	70-130			
1,2,4-Trimethylbenzene	0.116	0.0050	"	0.125	ND	92.6	70-130			
1,3,5-Trimethylbenzene	0.0921	0.0050	"	0.125	ND	73.7	70-130			
Naphthalene	0.0904	0.0038	"	0.125	ND	72.3	70-130			
Surrogate: 1,2-Dichloroethane-d4	0.0294		"	0.0400		73.5	50-150			
Surrogate: Toluene-d8	0.0360		"	0.0400		90.0	50-150			
Surrogate: 4-Bromofluorobenzene	0.0402		"	0.0400		100	50-150			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**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 BGA0714 - EPA 5030 Soil MS**

<b>Matrix Spike Dup (BGA0714-MSD1)</b>	<b>Source: 2301479-01</b>			<b>Prepared &amp; Analyzed: 01/30/23</b>						
Benzene	0.111	0.0020	mg/kg	0.125	ND	88.4	70-130	2.86	30	
Toluene	0.109	0.0050	"	0.125	ND	87.0	70-130	2.48	30	
Ethylbenzene	0.0985	0.0050	"	0.125	ND	78.8	70-130	3.03	30	
m,p-Xylene	0.197	0.010	"	0.250	ND	78.8	70-130	2.00	30	
o-Xylene	0.0932	0.0050	"	0.125	ND	74.6	70-130	3.17	30	
1,2,4-Trimethylbenzene	0.115	0.0050	"	0.125	ND	91.6	70-130	1.09	30	
1,3,5-Trimethylbenzene	0.0894	0.0050	"	0.125	ND	71.5	70-130	3.01	30	
Naphthalene	0.0927	0.0038	"	0.125	ND	74.2	70-130	2.49	30	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0304</i>		<i>"</i>	<i>0.0400</i>		<i>76.0</i>	<i>50-150</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0365</i>		<i>"</i>	<i>0.0400</i>		<i>91.2</i>	<i>50-150</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0400</i>		<i>"</i>	<i>0.0400</i>		<i>100</i>	<i>50-150</i>			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**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 BGA0715 - EPA 3550A**

**Blank (BGA0715-BLK1)**

Prepared & Analyzed: 01/30/23

C10-C28 (DRO)	ND	50	mg/kg								
C28-C36 (ORO)	ND	50	"								
Surrogate: <i>o</i> -Terphenyl	10.1		"	12.5		80.4		30-150			

**LCS (BGA0715-BS1)**

Prepared & Analyzed: 01/30/23

C10-C28 (DRO)	400	50	mg/kg	500		80.1		70-130			
Surrogate: <i>o</i> -Terphenyl	10.2		"	12.5		81.6		30-150			

**Matrix Spike (BGA0715-MS1)**

Source: 2301479-01

Prepared & Analyzed: 01/30/23

C10-C28 (DRO)	457	50	mg/kg	500	27.0	86.0		70-130			
Surrogate: <i>o</i> -Terphenyl	9.34		"	12.5		74.7		30-150			

**Matrix Spike Dup (BGA0715-MSD1)**

Source: 2301479-01

Prepared & Analyzed: 01/30/23

C10-C28 (DRO)	410	50	mg/kg	500	27.0	76.6		70-130	10.8	20	
Surrogate: <i>o</i> -Terphenyl	9.87		"	12.5		78.9		30-150			

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

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

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

**Batch BGA0686 - EPA 5030 Soil MS**

**Blank (BGA0686-BLK1)**

Prepared: 01/27/23 Analyzed: 01/28/23

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>0.0155</i>		"	<i>0.0333</i>		<i>46.6</i>	<i>40-150</i>			
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0229</i>		"	<i>0.0333</i>		<i>68.8</i>	<i>40-150</i>			

**LCS (BGA0686-BS1)**

Prepared: 01/27/23 Analyzed: 01/28/23

Acenaphthene	0.0273	0.00500	mg/kg	0.0333	81.9	31-137
Anthracene	0.0275	0.00500	"	0.0333	82.4	30-120
Benzo (a) anthracene	0.0275	0.00500	"	0.0333	82.5	30-120
Benzo (a) pyrene	0.0297	0.00500	"	0.0333	89.1	30-120
Benzo (b) fluoranthene	0.0266	0.00500	"	0.0333	79.9	30-120
Benzo (k) fluoranthene	0.0271	0.00500	"	0.0333	81.3	30-120
Chrysene	0.0282	0.00500	"	0.0333	84.5	30-120
Dibenz (a,h) anthracene	0.0242	0.00500	"	0.0333	72.5	30-120
Fluoranthene	0.0284	0.00500	"	0.0333	85.1	30-120
Fluorene	0.0272	0.00500	"	0.0333	81.7	30-120
Indeno (1,2,3-cd) pyrene	0.0245	0.00500	"	0.0333	73.5	30-120
Pyrene	0.0293	0.00500	"	0.0333	87.8	35-142
1-Methylnaphthalene	0.0249	0.00500	"	0.0333	74.6	35-142
2-Methylnaphthalene	0.0262	0.00500	"	0.0333	78.5	35-142
<i>Surrogate: 2-Methylnaphthalene-d10</i>	<i>0.0248</i>		"	<i>0.0333</i>	<i>74.4</i>	<i>40-150</i>
<i>Surrogate: Fluoranthene-d10</i>	<i>0.0280</i>		"	<i>0.0333</i>	<i>84.0</i>	<i>40-150</i>

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

Reported:  
02/02/23 14:17

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 BGA0686 - EPA 5030 Soil MS

Matrix Spike (BGA0686-MS1)

Source: 2301461-01

Prepared: 01/27/23 Analyzed: 01/28/23

Acenaphthene	0.0187	0.00500	mg/kg	0.0333	ND	56.1	31-137			
Anthracene	0.0193	0.00500	"	0.0333	ND	58.0	30-120			
Benzo (a) anthracene	0.0207	0.00500	"	0.0333	ND	62.0	30-120			
Benzo (a) pyrene	0.0222	0.00500	"	0.0333	ND	66.7	30-120			
Benzo (b) fluoranthene	0.0194	0.00500	"	0.0333	ND	58.2	30-120			
Benzo (k) fluoranthene	0.0187	0.00500	"	0.0333	ND	56.2	30-120			
Chrysene	0.0197	0.00500	"	0.0333	ND	59.0	30-120			
Dibenz (a,h) anthracene	0.0174	0.00500	"	0.0333	ND	52.2	30-120			
Fluoranthene	0.0195	0.00500	"	0.0333	ND	58.6	30-120			
Fluorene	0.0185	0.00500	"	0.0333	ND	55.6	30-120			
Indeno (1,2,3-cd) pyrene	0.0187	0.00500	"	0.0333	ND	56.0	30-120			
Pyrene	0.0206	0.00500	"	0.0333	ND	61.9	35-142			
1-Methylnaphthalene	0.0164	0.00500	"	0.0333	ND	49.1	15-130			
2-Methylnaphthalene	0.0171	0.00500	"	0.0333	ND	51.2	15-130			
Surrogate: 2-Methylnaphthalene-d10	0.0186		"	0.0333		55.7	40-150			
Surrogate: Fluoranthene-d10	0.0204		"	0.0333		61.3	40-150			

Matrix Spike Dup (BGA0686-MSD1)

Source: 2301461-01

Prepared: 01/27/23 Analyzed: 01/28/23

Acenaphthene	0.0207	0.00500	mg/kg	0.0333	ND	62.1	31-137	10.1	30
Anthracene	0.0209	0.00500	"	0.0333	ND	62.8	30-120	7.98	30
Benzo (a) anthracene	0.0227	0.00500	"	0.0333	ND	68.2	30-120	9.55	30
Benzo (a) pyrene	0.0244	0.00500	"	0.0333	ND	73.2	30-120	9.23	30
Benzo (b) fluoranthene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	10.8	30
Benzo (k) fluoranthene	0.0207	0.00500	"	0.0333	ND	62.1	30-120	9.91	30
Chrysene	0.0210	0.00500	"	0.0333	ND	63.0	30-120	6.56	30
Dibenz (a,h) anthracene	0.0203	0.00500	"	0.0333	ND	60.9	30-120	15.3	30
Fluoranthene	0.0216	0.00500	"	0.0333	ND	64.9	30-120	10.1	30
Fluorene	0.0212	0.00500	"	0.0333	ND	63.5	30-120	13.2	30
Indeno (1,2,3-cd) pyrene	0.0220	0.00500	"	0.0333	ND	66.1	30-120	16.5	30
Pyrene	0.0222	0.00500	"	0.0333	ND	66.7	35-142	7.47	30
1-Methylnaphthalene	0.0175	0.00500	"	0.0333	ND	52.5	15-130	6.64	50
2-Methylnaphthalene	0.0204	0.00500	"	0.0333	ND	61.2	15-130	17.7	50
Surrogate: 2-Methylnaphthalene-d10	0.0214		"	0.0333		64.1	40-150		
Surrogate: Fluoranthene-d10	0.0227		"	0.0333		68.1	40-150		

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

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

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

**Batch BGA0766 - EPA 3050B**

**Blank (BGA0766-BLK1)**

Prepared: 01/31/23 Analyzed: 02/01/23

Boron ND 0.0100 mg/L

**LCS (BGA0766-BS1)**

Prepared: 01/31/23 Analyzed: 02/01/23

Boron 5.22 0.0100 mg/L 5.00 104 80-120

**Duplicate (BGA0766-DUP1)**

**Source: 2301464-01**

Prepared: 01/31/23 Analyzed: 02/01/23

Boron 0.106 0.0100 mg/L 0.126 16.7 20

**Matrix Spike (BGA0766-MS1)**

**Source: 2301464-01**

Prepared: 01/31/23 Analyzed: 02/01/23

Boron 5.25 0.0100 mg/L 5.00 0.126 102 75-125

**Matrix Spike Dup (BGA0766-MSD1)**

**Source: 2301464-01**

Prepared: 01/31/23 Analyzed: 02/01/23

Boron 5.28 0.0100 mg/L 5.00 0.126 103 75-125 0.607 25

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGA0675 - EPA 3050B**

**Blank (BGA0675-BLK1)**

Prepared: 01/27/23 Analyzed: 01/28/23

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

**LCS (BGA0675-BS1)**

Prepared: 01/27/23 Analyzed: 01/28/23

Arsenic	43.2	0.200	mg/kg wet	40.0	108	80-120
Barium	43.8	0.400	"	40.0	110	80-120
Cadmium	2.13	0.200	"	2.00	107	80-120
Copper	42.1	0.400	"	40.0	105	80-120
Lead	23.3	0.200	"	20.0	116	80-120
Nickel	40.0	0.400	"	40.0	99.9	80-120
Selenium	4.57	0.260	"	4.00	114	80-120
Silver	2.07	0.0200	"	2.00	104	80-120
Zinc	40.4	0.400	"	40.0	101	80-120

**Duplicate (BGA0675-DUP1)**

Source: 2301431-01

Prepared: 01/27/23 Analyzed: 01/28/23

Arsenic	3.03	0.246	mg/kg dry	3.44	12.4	20	
Barium	97.6	0.492	"	113	14.6	20	
Cadmium	0.177	0.246	"	0.228	25.0	20	QR-01
Copper	5.32	0.492	"	5.56	4.36	20	
Lead	7.04	0.246	"	7.42	5.34	20	
Nickel	6.04	0.492	"	6.40	5.73	20	
Selenium	ND	0.260	"	ND		20	
Silver	0.0350	0.0246	"	0.0364	4.14	20	
Zinc	18.3	0.492	"	18.6	1.83	20	

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

Reported:  
 02/02/23 14:17

**Total Metals by EPA 6020B - Quality Control**  
**Summit Scientific**

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

**Batch BGA0675 - EPA 3050B**

**Matrix Spike (BGA0675-MS1)**

Source: 2301431-01

Prepared: 01/27/23 Analyzed: 01/28/23

Arsenic	53.3	0.246	mg/kg dry	49.2	3.44	101	75-125				
Barium	160	0.492	"	49.2	113	96.5	75-125				
Cadmium	2.49	0.246	"	2.46	0.228	92.0	75-125				
Copper	36.4	0.492	"	49.2	5.56	62.6	75-125				QM-05
Lead	29.7	0.246	"	24.6	7.42	90.3	75-125				
Nickel	36.1	0.492	"	49.2	6.40	60.3	75-125				QM-05
Selenium	5.17	0.260	"	4.92	ND	105	75-125				
Silver	2.21	0.0246	"	2.46	0.0364	88.4	75-125				
Zinc	48.9	0.492	"	49.2	18.6	61.5	75-125				QM-05

**Matrix Spike Dup (BGA0675-MSD1)**

Source: 2301431-01

Prepared: 01/27/23 Analyzed: 01/28/23

Arsenic	56.8	0.246	mg/kg dry	49.2	3.44	108	75-125	6.42	25		
Barium	166	0.492	"	49.2	113	107	75-125	3.15	25		
Cadmium	2.66	0.246	"	2.46	0.228	98.9	75-125	6.55	25		
Copper	38.0	0.492	"	49.2	5.56	65.8	75-125	4.20	25		QM-05
Lead	30.9	0.246	"	24.6	7.42	95.4	75-125	4.19	25		
Nickel	37.8	0.492	"	49.2	6.40	63.9	75-125	4.81	25		QM-05
Selenium	5.43	0.260	"	4.92	ND	110	75-125	5.02	25		
Silver	2.34	0.0246	"	2.46	0.0364	93.6	75-125	5.56	25		
Zinc	50.1	0.492	"	49.2	18.6	63.9	75-125	2.39	25		QM-05

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**Hexavalent Chromium by EPA Method 7196 - Quality Control**  
**Summit Scientific**

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

**Batch BGA0690 - 3060A Mod**

**Blank (BGA0690-BLK1)**

Prepared & Analyzed: 01/27/23

Chromium, Hexavalent      ND      0.30    mg/kg wet

**LCS (BGA0690-BS1)**

Prepared & Analyzed: 01/27/23

Chromium, Hexavalent      25.6      0.30    mg/kg wet      25.0      102      80-120

**Duplicate (BGA0690-DUP1)**

**Source: 2301419-01**

Prepared & Analyzed: 01/27/23

Chromium, Hexavalent      ND      0.30    mg/kg dry      ND      20

**Matrix Spike (BGA0690-MS1)**

**Source: 2301419-01**

Prepared & Analyzed: 01/27/23

Chromium, Hexavalent      29.0      0.30    mg/kg dry      30.2      ND      96.0      75-125

**Matrix Spike Dup (BGA0690-MSD1)**

**Source: 2301419-01**

Prepared & Analyzed: 01/27/23

Chromium, Hexavalent      29.2      0.30    mg/kg dry      30.2      ND      96.8      75-125      0.830      20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

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

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

**Batch BGA0677 - General Preparation**

**Blank (BGA0677-BLK1)**

Prepared: 01/27/23 Analyzed: 01/30/23

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

**LCS (BGA0677-BS1)**

Prepared: 01/27/23 Analyzed: 01/30/23

Calcium	5.69	0.0500	mg/L wet	5.00		114	70-130			
Magnesium	5.13	0.0500	"	5.00		103	70-130			
Sodium	4.92	0.0500	"	5.00		98.5	70-130			

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

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

**Summit Scientific**

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

**Batch BGA0733 - General Preparation**

**Duplicate (BGA0733-DUP1)**

**Source: 2301463-01**

Prepared & Analyzed: 01/30/23

% Solids	85.8		%		85.2			0.666	20	
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Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**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 BGA0701 - General Preparation**

**Blank (BGA0701-BLK1)**

Prepared & Analyzed: 01/28/23

Specific Conductance (EC) ND 0.0100 mmhos/cm

**LCS (BGA0701-BS1)**

Prepared & Analyzed: 01/28/23

Specific Conductance (EC) 0.146 0.0100 mmhos/cm 0.150 97.0 95-105

**Duplicate (BGA0701-DUP1)**

Source: 2301278-17

Prepared & Analyzed: 01/28/23

Specific Conductance (EC) 0.178 0.0100 mmhos/cm 0.179 0.616 20

Summit Scientific

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Fremont Environmental  
 PO Box 1289  
 Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
 Project Manager: Paul Henehan

**Reported:**  
 02/02/23 14:17

**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 BGA0702 - General Preparation**

**LCS (BGA0702-BS1)**

Prepared & Analyzed: 01/28/23

pH 9.00 pH Units 9.18 98.0 95-105

**Duplicate (BGA0702-DUP1)**

Source: 2301463-01

Prepared & Analyzed: 01/28/23

pH 7.79 pH Units 7.78 0.128 20

Summit Scientific

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Fremont Environmental  
PO Box 1289  
Wellington CO, 80549

Project: Noble - Balboa Tank Battery

Project Number: [none]  
Project Manager: Paul Henehan

**Reported:**  
02/02/23 14:17

### Notes and Definitions

- QR-01     Analyses are not controlled on RPD values from sample concentrations less than 10 times the reporting limit. QC batch accepted based on LCS and/or LCSD QC results.
- QM-05     The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The associated LCS and/or LCSD were within acceptance limits, therefore the data are considered valid.
- 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